An Outdoor Journalist's

Guide to Population Issues

THE IZAAK WALTON LEAGUE OF AMERICA

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Founded in 1922, the Izaak Walton League of America is dedicated to commonsense conservation that protects America's hunting, fishing, and outdoor heritage relying on solution-oriented conservation, education, and the promotion of outdoor recreation. The League has 40,000 members and supporters in 21 state divisions and more than 300 community-based chapters.

For more information or to request additional copies of this publication, contact:

The Izaak Walton League of America
Sustainability Education Program
707 Conservation Lane
Gaithersburg, MD 20878
(301) 548-0150
sustain@iwla.org
www.iwla.org

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Edited by:
Jim Baird, director, IWLA Sustainability Education Program

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Fishermen on opening day of trout season, Bennett Spring Park, Missouri. Photo by Doris J. Brookes

Foreword

By Tom Horton

Who says we've got too many people? All 6.4 billion on Earth could fit within the city limits of Jacksonville, Florida. And a few good-sized farms would hold the 16 million who populate my native Chesapeake Bay watershed. Of course, they'd be packed shoulder to shoulder, about 4 square feet each; and soon someone would want to go to the bathroom, and then you'd hear complaints about contaminated drinking water. Next they'd want cars and roads, and you'd have a traffic jam and air pollution—and cries that there oughta be a law against that.

The above scenario's absurd, but the point is real. The more people you put in a place, the more we inevitably must make rules and concessions to limit our impacts on the environment and on one another.

One of the biggest quality of life changes I've seen since my 1950s boyhood on Maryland's Eastern Shore is that the fields and forests I roamed are all marked "Posted, Keep Out." We might reverse pollution in the Chesapeake, but we won't reverse that. Even in areas remaining rural, when a local tries to rent a waterfowling marsh, he's competing against ever more sportsmen seeking respite from urban growth centers.

As for the Chesapeake, we've been trying to restore its health for more than two decades now, with the backing of the U.S. Environmental Protection Agency and the main watershed states of Virginia, Maryland, and Pennsylvania. The bay's not much better than when we started. But as every politician will tell you, we've accomplished miracles in keeping pollution from getting worse as another few million people moved here.

They say it as if population growth were a natural force, like the wind or tides, to be accommodated, never questioned. Environmental groups are nearly as uncritical. They focus their energy on bringing human behavior—*how* we live—into sustainable balance with nature. That's vital. But any thought that it also matters *how many* of us there are seems taboo.

No matter how successful we are at reducing per-capita impacts on nature—from slowing sprawl development to upgrading sewage treatment plants—the number of us "capitas," growing without limit, will erode and eventually reverse much of that progress.

No one has more to lose from this than the outdoor community, from kayakers and birdwatchers to hunters and trappers—those whose quality of life is intricately bound up with preserving the quality of nature. It's time for us who write about the outdoors to step up to the plate because, frankly, no one else is doing it.

So how do we start writing about the unspeakable? Maybe refer to 1972, when Richard Nixon's bipartisan Congressional Commission on Population Growth and the American Future concluded, "No substantial benefits will result from further growth of the nation's population.... The health of our country does not depend on it, nor does the vitality of business nor the welfare of the average person ..."

When the report came out, the U.S. fertility rate and foreign immigration—the two sources of population growth—had fallen to where population wasn't a big issue. But immigration has quadrupled since, and with a rising fertility rate, the Census Bureau projects we'll hit 570 million Americans by century's end.

That's more than double today's 281 million. Population experts say that by limiting immigration, or by voluntary education and anti-poverty programs designed to reduce the birth rate—or a combination of both—we could stabilize U.S. numbers around 400 million by late in the century.

So: 400 million, or 570 million and counting? The biggest roadblock to having this critical debate is the myth of "grow or die"—the assumption, promoted by chambers of commerce and accepted unquestioningly by politicians, that economic prosperity requires unceasing population growth. That would be news to many nations that prosper with stable or declining populations, and it's refuted by studies in this country that distinguish between economic development and sheer increases in people.

Another great myth is that technology will bail us out. Take the non-polluting cars that Detroit touts as just around the corner. Drive without limit and breathe clean air. But how does that solve traffic congestion and the need for more roads, eviscerating more countryside?

Writing about population is difficult. Issues around immigrants and family size must be approached with sensitivity and respect. Making population "news" when few traditional newsmakers speak about it is hard. When totting up the benefits of new malls, conventional economics doesn't subtract losses of wetlands or the pollution-absorbing ability of the forests we replaced with asphalt.

But it is a ruse to beat the drums for public support while pretending endless population growth won't ultimately erode any gains. Freedom to grow without limit ultimately limits other freedoms. Here are some resources I've personally found helpful when writing about growth and population issues:

- *In Growth We Trust,* by Edwin Stennett (www.growtheducation.org).

- *Shoveling Fuel for a Runaway Train,* by Brian Czech, University of California Press, 2000.

- *For the Common Good,* by Herman Daly and John Cobb, Jr., Beacon Press, Boston, MA, 1989.

Tom Horton *is the Chesapeake Bay columnist for the* Baltimore Sun *and author of six books about the bay. A native of Maryland's Eastern Shore, he grew up hunting waterfowl and fishing the Chesapeake and its rivers. A journalist for 33 years, Horton is 59, married, with two grown kids. These days he does most of his fishing, trolling, and casting from a kayak, which is not a bad craft for jump-shooting ducks either, so long as you don't get too excited and tip over.*

Introduction

By Jim Baird, director of the IWLA Sustainability Education Program

In 1922, the founders of the Izaak Walton League pledged themselves to protect outdoor America. Not just the birds or the streams or other individual facets of the natural world—the League vowed to protect it all. "Defenders of soil, air, woods, waters, and wildlife" became our motto. It was a holistic approach that had never been tried.

Most of those early League members were hunters and anglers. They were driven by their passion for their pursuits. They loved the outdoors because they used them. Through excise taxes on hunting and fishing licenses and equipment, they paid the bill for establishing wildlife laws, federal and state resource agencies, and scientific wildlife management across the United States.

Thirty years after this movement was ignited, the League became one of the first conservation groups to give serious thought to how human population affected nature. Specifically, League members began talking at the national and even international levels about the effects of unlimited human population growth. These discussions led to League members approving a seminal policy statement in 1970 calling for population stabilization through voluntary means and supporting government programs for education and family planning.

Today, the population issue is still with us, but it has become so embroiled in extreme rhetoric related to contraceptives and abortion that it is difficult to discuss solutions. But we must continue to talk about it. Every major threat to outdoor recreation—from climate change to hunting access, from habitat loss to dying fisheries—is, at its base, an issue about how people can continue to thrive while maintaining a livable world. It's a problem that is real and a story that must be told.

In 1993, the League launched its advocacy and education campaign on population and sustainability. We have consistently framed our message in terms of environmental concern and commonsense solutions. Our education of League members and others has led to some success. Yet, the issue grows more polarized and, despite clear achievements in slowing global population growth, the need still far outweighs financial and political support. It has become clear to us that a fresh approach to educating Americans is needed. So we are asking our core constituency to help us move the issue forward: the tens of millions of Americans that hunt, fish, camp, hike, boat, and otherwise use the outdoors as their principal source of recreation. To help us reach and educate this audience, we knew we needed partners who could speak in a way that would resonate: America's corps of outdoor journalists.

Will we find a receptive audience? We think so, because we have asked and received a strong response. In separate polls—a survey of our membership in 2001 and another survey of members and prospective members in 2003—we found broad support for family planning and a major concern about sprawl,

the most visible manifestation of population growth in the United States. Furthermore, when asked, most Americans express awareness of the general connection between population growth and environmental problems. They just don't yet see how specific problems, such as pollution, habitat loss, and wildlife management, are directly linked to the growth of human needs and numbers.

These are the stories we want outdoor journalists to tell. For years, some writers have reported on the connection. A few of them have helped us put together this guide. We feel there is potential for much greater focus on these issues. We hope this project will help to unleash some of that potential and make it easier for journalists to tackle these tough stories.

In section 1, we review the basics of demography—how the numbers work. It is meant to help journalists understand how population dynamics function and prepare them to be consumers of demographic information from more in-depth sources.

Section 2 makes the case for a connection between population and the outdoors. We supply facts and figures that illustrate how population issues can be woven into the context of global and local cases.

In section 3, we present findings from a literature review of what has already been written in the outdoor press on population over the last 20 years. This review of 126 articles from a broad diversity of publications by 95 authors offers insights into how the issue has been covered.

Section 4 offers several story ideas for making the connection on your own.

In section 5, two established outdoor journalists who have already written about this issue speak directly to their peers. George Reiger, former conservation columnist with *Field & Stream,* and Todd Wilkinson, a freelance outdoor writer, offer their thoughts on why the issue is so vital and give advice on how it can be best approached.

Section 6 focuses on solutions. Despite the controversy and rhetoric surrounding population issues, there are straightforward ways to stabilize population while respecting individual conscience and local cultures. These solutions are not only good for the outdoors and recreation, they alleviate poverty and provide better health for people, especially women and children. This section ends with actions that citizens can take that they can feel comfortable with and will make a difference.

In the final section, we provide a list of resources where journalists can go for more information.

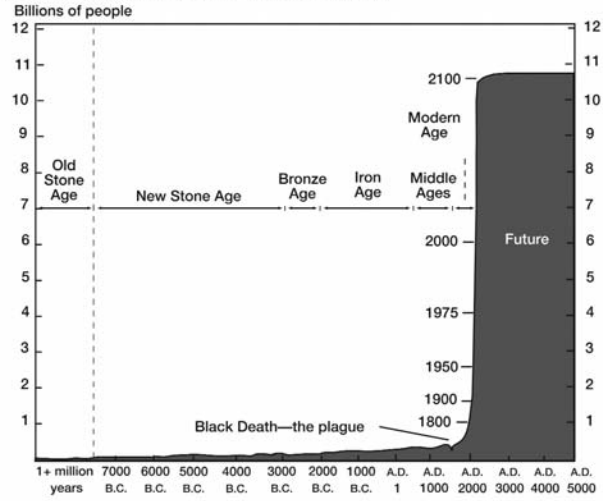
We are indebted to the outdoor writers who have encouraged us in this project. Their contributions to both American journalism and the cause of conservation are immense. They have stuck with us and pushed us to continue the League's tradition of taking on tough issues in a fair-minded way. We hope that this publication and its companion piece, a collection of essays titled *Population Growth and Outdoor America,* will encourage journalists to look at their subject matter in a new way and continue to challenge their readers to put their ethics and their actions on the line in defense of the natural world.

Demography 101

"The study of population offers something for everyone: the daily dramas of sex and death, politics and war; the interlacings of individuals in all their collectivities; the confrontations of nature and civilization, statistics and diaries, self-interest and altruism." *Samuel Preston*[1]

If journalists are going to cover population and its effect on the outdoors, they must first understand some basic dynamics. What are the causes of population growth, decline, and stabilization? Will we just keep growing forever? In this section, we offer a starting point for answering these questions. Several of the many approachable primers on the subject are listed in the resources section.

Figure 1
World Population Growth Through History



Sources: Population Reference Bureau; and United Nations, *World Population Projections to 2100* (1998).

Human population growth hasn't always been an issue. For more than 1 million years, people maintained a stable population because the number of births and deaths were about equal. It was not until around 8000 B.C., with the beginnings of agriculture and animal husbandry, that we began to grow beyond about 10 million souls.[2] Growing at a leisurely annual pace of about .00002 percent, it took until 1650 to reach 500 million. But as with anything that increases steadily over time, the jumps became faster. We reached our first billion in 1800, the second in 1930, third in 1960, and the fourth in 1975. By 1995, population had soared to six billion. Today, we are at 6.4 billion. The pace of growth is slowing, but we will probably grow by about a third, reaching about 9 billion, by 2050.[3] See Figure 1 for a graphical illustration of this population spike.

The Basics

At its most basic, population dynamics come down to four factors and some fairly simple math. Births and deaths are the first two factors. When the birth rate and death rates are about even, the population is stable. When births outnumber deaths, the population increases, and vice versa.

The third factor is fertility rate—how many children a woman gives birth to during her lifetime. Fertility rate depends on many variables: the mother's health, her longevity, her age when she marries, her education, her cultural and religious beliefs, and whether she lives in urban or rural areas. "Replacement-level" fertility is the rate that leads to a stable population, where one generation replaces itself without adding population. We often think of this number as being 2—one child for each parent. But in reality, the replacement level depends on the death rate. If the death rate is high, more children per woman are necessary to maintain replacement. If the death rate is low, a lower fertility rate is required. In the United States, the replacement level is 2.1. In a country with a high death rate, such as Sierra Leone, the number is 3.

The fourth factor affecting population growth or decline is the average age of people. Growing populations (above replacement level) are younger; they have greater ratios of young to old members. This means there are more females in their childbearing years. Even if the fertility rate were to decline to a replacement level, such a population has enough momentum to grow for some time. If replacement-level fertility is maintained over time, the population will get older so that the base of women still having children shrinks. This tilts the trend toward a smaller population.

Basic Concepts of Demography

Birth and death rates: The number of births and deaths in a given year. For comparison purposes, these rates are usually expressed as births/deaths per 1,000 people.

Fertility rate: The number of children born to an individual or a population. "Total fertility rate" is the average number of children being born per woman at a given point in time. It can be calculated for any population and compared across countries and over time.

Replacement-level fertility: This is when couples have just enough children to replace themselves. If this level is maintained for long enough, the population stops growing. Though usually thought of as a total fertility rate of two, the replacement level for a given population depends on death rates. In places where many children die before having children of their own, the actual replacement number is higher.

Momentum: Populations can grow or decline even after reaching replacement-level fertility due to their "age structure." Having a greater number of young people (like most developing nations) prolongs growth because there are many women still in their childbearing years. Conversely, older populations will likely have more deaths than births even if they are at a zero-growth rate.

How We Got Where We Are

Throughout our slow evolution from hunting-gathering societies to agricultural-industrial societies, fertility rates were relatively high. High death rates, the need for labor, and the importance of children supporting their parents in old age placed a premium on having children. This need shaped our values and culture.

As we moved into the 20th century, improvements in agriculture, manufacturing, transportation, and medicine had tremendous impacts on the economy and society. Fewer children died. People lived longer and maintained better health. They became more educated, more urban, and women began to have new roles in society beyond childbearing and rearing. When this happened, fertility rates started to decline. This demographic transition began in Europe in the 1900s and has become the pattern throughout most of the world. Across nations and within them, lower fertility rates are associated with higher income, more education, living in urban areas, and the increased availability of contraceptives.

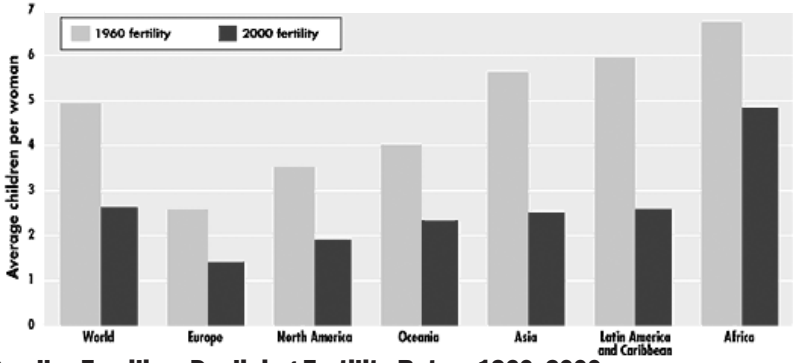
The Dynamics of Deer Populations

The dynamics of human population growth can also be seen in other species, such as white-tailed deer. In a stable situation where habitat, food sources, disease, and predators are relatively constant, fertility rates (the average number of fawns per female) produce births in balance with deaths and the population remains stable. However, if mortality decreases (reduced predators for example), the same fertility rate will cause the population to grow. Likewise, several mild winters might increase the deers' health and therefore increase their fertility, causing population to increase. Either way, this growth produces a younger population with a bigger base of females. So, even if predators rebound or winters get colder, momentum will cause continued growth for some time.

Migration

So far, we have talked about factors that change population from within—so-called "natural increase." However, no country is isolated, and people are constantly moving from one place to another, affecting local populations as they do. From earliest times, people have migrated in response to conditions that "push" them from where they are (lack of economic opportunities, conflict or persecution, and environmental problems) or that "pull" them to new places (economic opportunities, safety, and personal freedoms). With improved transportation and larger populations, this movement has greatly increased. While only approximate, the Global Commission on International Migration estimates that in 1999 there were 179 million people living outside their country of birth, with another 100 million migrations.[4]

Whether between or within countries, most migration tends to be from poorer areas to those with more economic opportunities. Less affluent rural



Smaller Families: Declining Fertility Rates, 1960–2000

Fertility rates vary widely between countries, but they also vary widely within countries. Europe has some of the lowest rates—most below two children per woman. Sub-Saharan Africa has the highest rates, between five and six children per woman, though educated women in the cities have far fewer children than their rural counterparts. Women in the United States average two children per woman, but low-income women and some social and religious groups have higher averages. Global fertility rates have been reduced dramatically since 1960, from six children per woman to three. However, due to the long period of growing populations worldwide, the age structure is still relatively young. That is why, despite the decline, momentum will cause human population to continue to grow well into the 21st century.

Source: Why Population Matters to Natural Resources. *Population Action International. Washington, D.C.*

people tend to move to cities in their own countries, and people from developing countries tend to move to developed ones. It is generally the more educated and adventuresome individuals who move, regardless of income. This brings some advantages to their new community, but contributes to a "brain drain" at home.

The United States is a country of immigrants. In recent years, America has received twice as many immigrants as all other countries combined.[5] The United States has been receiving around 1.5 million people annually in the last few years. During the 1990s, about 900,000 immigrants entered legally and between 335,000 and 500,000 entered illegally. This influx accounts for about half of the U.S. annual population growth of nearly 3 million.[6] On average, immigrants have higher fertility than native-born Americans—at least for the first few generations. Also, since the age of most immigrants is relatively young, immigration is affecting the U.S. age structure, helping to postpone the transition to less-than-replacement fertility.[7] These factors make international migration the largest influence on our population growth, even though many other elements (high rates of unwanted pregnancies, lack of universal health insurance, and increasing life expectancy) also affect it.

Immigration has become an emotionally charged issue in the United States in

Global Population Snapshot Today

—Global population, now 6.4 billion, is growing by 70 million people per year. Worldwide, the average family size has declined from six children per woman in 1960 to around three today.

—Assuming that fertility will continue to decline, demographers project that the total human population will start to level off by 2050. At that point, we could have added some 2.5 billion people—an amount equal to the world's total population in 1950.

—The number of adolescents aged 10 to 19 is at an all-time high of 1.2 billion. The reproductive decisions of this generation will greatly affect the future for everyone.

—In the poorest countries, where fertility and mortality remain high and access to family planning is limited, the transition to smaller families is only just beginning. Ninety-six percent of the projected growth will be in developing countries.

—The populations of Europe and Japan are declining, and the pace of decline is projected to double by 2015. North America is growing at about 1 percent annually, mostly due to immigration.

Source: UNFPA. State of the World Report 2004

recent years. This is not surprising given the cultural, racial, political, economic, and environmental issues that immigration affects. Unfortunately, polarized positions and lack of context on the part of many means that there has been less light than heat in the debate. Some important factors must be kept in mind:

First, virtually every successive wave of immigrants to America has been greeted with some hostility from the preceding generations.

Second, all immigrants to the United States have been responding to the very same "push-and-pull" factors, though the context for them has been different at different times.

Third, the United States is not a passive actor in the forces that push and pull people to migrate. Our policies—from trade to foreign assistance to diplomatic relations—affect the social, economic, and security conditions of many countries.

Fourth, most immigrants to the United States (nearly half in 2000) arrive legally as part of the family reunification policy.[8]

Fifth, U.S. companies actively recruit foreign workers for both lower and higher paid work. Having a pool of individuals who will work for wages that are generally lower than what native-born Americans would demand is good for the companies' bottom lines, even as it depresses wages overall.

Finally, America has a highly mobile society, with 46 percent of its population changing residence in 2000. Three percent of those "movers" were from abroad.[9]

The growth and movement of human population around the globe is probably the most significant planetary phenomenon since the last ice age. We hope that this brief primer helps to explain some of the dynamics that are involved. The Resources Section of this guide provides more in-depth information sources.

The Population-Environment Connection

It might seem obvious that more people means less room for nature and wildlife. We can see the influence of humans on most landscapes around us: more miles of superhighways; sprawling, low-density development that is gobbling up farmland; and rivers and streams that are nowhere near being swimmable or fishable because of pollution.

Still, proving the direct relationship between a greater number of humans and specific impacts on natural resources—not to mention getting people to accept this connection and do something about it—remains difficult. There are a number of reasons why the connection is a hard one to establish both at the scientific and individual levels.

Science likes straight-line connections—clear causal relationships showing how one variable affects another in a predictable way. When dealing with population impacts, however, these lines more closely resemble a bowl of spaghetti; the connections are there but hard to untangle.[10]

Though science may have trouble getting enough data to quantify the effects of population, people are often limited by their perceptions. We may observe local farms being sold, wetlands drained, or traffic congestion increasing, but we tend to think of these as local phenomena. The broader cumulative impact of more people consuming more resources is very hard to see, much less fathom. Also, we have been conditioned to view growth—not just in population, but also in the economy as a whole—as inevitable and even desirable.

Despite the difficulties in tying population directly to its effects, researchers from many disciplines are making progress. Let's look at several examples of measurements at the global level and some that are closer to home.

Ecological Footprint

In 1995, scientists William Reese and Mathis Wackernagel developed a model to measure people's use of nature. They called it the "Ecological Footprint," and it estimates how much of the world's natural resources an individual requires for a specific type of lifestyle.[11] The most recent data tells us that each individual uses an average of 5.4 acres per person of the earth's natural resources. However, there are just 4.5 acres per person available. This ecological deficit is called an overshoot. In 2001, our population and affluence levels, as well as our technological efficiency, were already using up more than the earth could produce.

Even if we could freeze the growth of population and affluence today, we would still be drawing down on the principal of our natural capital rather than living sustainably on the interest. But our growth will not be stopping anytime soon. Every year, we add more than 70 million people to the world, and we

will likely have 30 percent more people by 2050. Consumption per capita will also rise as the world's less-developed countries strive to raise their standards of living. Though more efficient technology can help to reduce our collective footprint, chances are slim that technology alone will slow the drain on our natural capital.

FIGURE 2.

Figure 2 (World Wildlife Fund, 2004) shows the ratio between the world's demand and the world's supply of natural resources in each year, and how this ratio has changed over time. Expressed in terms of "number of Earths," the biocapacity is always 1 (represented by the horizontal line). This graph shows how humanity has moved from using, in net terms, about half the planet's biocapacity in 1961 to 1.2 times its biocapacity in 2001. The global "ecological deficit" of 0.2 Earths is equal to the globe's ecological overshoot.

Population and Greenhouse Gases

One of the clearest relationships between population and an environmental problem has to do with carbon dioxide emissions.[12] Two hundred years ago, people began burning fossil fuels at an unprecedented rate. Total emissions of carbon dioxide increased 820-fold between 1800 and 1999 (from 8 million to 6.5 billion metric tons per year).

When we look at the number of emissions per person, the number surged 100-fold (from 0.01 to 1.1 metric tons per person) between 1800 and 1970. But after 1970, the picture changed. Instead of climbing, global emissions of carbon dioxide per person have nearly stabilized (between 1.1 and 1.2 metric tons). No mystery there: It's because we are getting more efficient. But total emissions have continued their meteoric rise, growing by nearly 60 percent in just 30 years. The conclusion: Population growth is now the major driver of carbon dioxide emissions.

So now, if you care about greenhouse gases—as outdoor recreationists should, since game habitats could be radically altered—what happens to population makes a difference. When demographers look ahead to 2050, they make high, medium, and low projections for world population based on what happens to fertility rates. If carbon dioxide emissions per capita remain where they have been since 1970, the low projection (7.4 billion people) could result in 30-percent fewer emissions compared to the high projection (10.6 billion people). Looked at in this way: What we do—or don't do—to help fertility levels continue their current decline has a potential for large-scale environmental impact.

Measurements at the global scale help to illustrate that population and the

environment are indeed linked. But most people experience conservation threats at a much more personal level. The following examples look at the interactions closer to home.

Sprawl

Sprawl, the spread of housing and commercial development into open space, is often seen as a planning issue. The common sentiment might be characterized as: "If only we grew smarter and did not increase the per capita land use, we could save the farms." But a study of the 2000 U.S. Census data shows that this is only half the story.[13]

The study looked at three elements in 100 U.S. cities: land consumption per person, population growth, and sprawl. In 71 cities, both land consumption per person and population grew. As a result, sprawl in these cities increased by 85 percent. No surprises there. However, when the study looked at cities that experienced either an increase in land consumption per person or an increase in population—but not both—the results are more interesting. For the 11 cities that experienced only an increase in land consumption per person, sprawl increased by just 26 percent. But for the 18 cities that experienced only a population increase, sprawl increased by a whopping 53 percent. These numbers tell us that although land consumption per person contributes to sprawl, population growth is is an important but often overlooked factor. Over the whole study, population growth consistently accounted for at least half of the increase.

Coastal Area Development

Coastal lands and waters are some of the world's most beautiful and productive areas. They are rich in waterfowl and migratory birds, and they provide spawning areas and habitat for more than 75 percent of America's commercial fisheries catch and 80 percent of its recreational fisheries catch.[14] The world's coral reefs surpass tropical forests in terms of basic productivity.[15] But with approximately 3 billion people—about half of the world's population—living within 120 kilometers of a coastline, people are threatening the ecosystems that brought them to the coasts in the first place.

The U.S. Geological Service warns: "The crisis in the coastal zone is worldwide but is especially alarming in the United States, where an expanding and more affluent population combined with a variety of government subsidies over the past 50 years have enabled widespread and often unwise development to take place."[16]

Coastal watershed counties make up 25 percent of the U.S. land area, but more than half of our population lives in them. That's a density of people per square mile two or three times higher than the rest of the county. This includes the Great Lakes Basin, where a fifth of Americans reside. Steadily growing at

more than 1.1 million people per year, the U.S. coasts will have absorbed 58 million people between 1970 and 2015, for a total population of 165 million.

According to the U.S. Commission on Ocean Policy, the development spreading from the shorelines into upland areas "has had the effect of expanding environmental consequences over larger geographic areas and has eroded the health of ecosystems and resources throughout coastal watersheds. Pollution is already severe near large coastal urban areas and has hurt recreation activities and the fishing industry."[17] Impacts described in the commission's 2004 report include: 23 percent of the nation's estuarine areas were impaired for swimming, fishing, and supporting marine species by 2001; pollution threatens the safety of drinking water for millions of people living near or around the Great Lakes; and more than 80 of our bays and estuaries show signs of nutrient over-enrichment, including oxygen depletion, loss of seagrass beds, and toxic algal blooms.

Infrastructure and Water Quality

A December 2004 article in the *Seattle Post-Intelligencer* points out the intricate and overlapping links between population and the environment, in this case, regarding sewage treatment.[18] First, there is the initial link between more people and more sewage: "The EPA has warned for years that construction and repair of sewer systems and treatment plants has not kept pace with population growth. The U.S. population has risen from 205 million people in 1970 to 294 million people today."

Then, a confounding factor is introduced—global warming, which is also influenced by population increase: "At the same time, global warming has increased annual rainfall in the continental United States on average about 10 percent over the past century and 'extreme precipitation events' have increased nearly 20 percent, with most of the increase occurring since 1970, according to the National Climatic Data Center."

The substantial cost of fixing the problem is further hampered at least in part by population, since the budget crisis faced by counties and municipalities often results from the increased cost of providing services to new residents.

"The Association of Metropolitan Sewerage Agencies pegs the cost at $300 billion to $600 billion over the next 20 years and says a large federal trust fund needs to be created to deal with the projected funding shortfall," the article said.

The result?

"The EPA estimates more than 850 billion gallons of completely untreated sewage escapes from aging and inadequate sewage pipes every year before it reaches treatment plants."

The conclusion we can draw from these kinds of examples is that the relationship between population growth and environmental degradation is becoming more a matter of fact than intuition.

Population in the Outdoor Press: A Literature Review

Outdoor journalists who want to address the effects of population growth on outdoor recreation should first examine how this subject has been treated in the past. One place to look is the Izaak Walton League's magazine, *Outdoor America,* which began publishing articles on human population growth in the 1950s. Ten articles were published between 1956 and 1970, when League members wrote the organization's first official policy on population. Most of these articles were written by individuals from academia and natural resource agencies. All took the view that human population growth is a serious threat to natural resources in general and to outdoor recreation specifically. Since that time, the League has printed numerous other articles by staff, members, and others.

To look more broadly at the outdoor press, we conducted a literature search focusing on an array of recreation, environmental, and mainstream news publications. Articles and writers were identified from Internet searches of keywords such as "human growth," "international family planning," and "sprawl," associated with outdoor recreation activities such as hunting, fishing, and bird watching. The search was limited to articles published from 1980 to 2004. We obtained and reviewed 126 articles that met the criteria of covering some outdoor recreation, wildlife, or conservation issue and made some specific reference to human population growth. This search was certainly not exhaustive, and many more articles undoubtedly exist that mention population growth as an issue. However, this limited sample shows that population growth is of some interest in the outdoor press and it provides a frame of reference for how the issue has been, and can be, handled. For complete references for the articles referred to in this section, contact the Izaak Walton League .

General Summary

The 126 articles we ended up with came from 65 different publications (see Table 1). We broke the publications down into four categories: Consumer publications, which are usually written for specific recreational audiences (e.g. *Field & Stream* or *Birder's World*); government publications, often published by state natural resource agencies (e.g. *Montana Outdoors* or *Wyoming Wildlife*); news publications (e.g. *New York Times* or *Time*); and association publications, published by a non-governmental organization (e.g. *Audubon* or *American Forests*).

The articles were written by 95 different writers, including contributors to national magazines, sports section staff writers for daily newspapers, and staff of state natural resource agencies and nonprofits. In 14 cases, more than one article was found for an author. Several writers (and the publications they most often wrote for) showed themselves to be real champions on the issue. Notable

Table 1

Publications where we found articles with population-environment connections.

Publication Name by Type	No. Articles
Consumer (total)	**33**
Bowhunter	4
Boy's Life	1
Cross Country Skier	1
Field & Stream	3
Fly Fisherman	1
Hunting	3
International Wildlife	2
National Fisherman	2
Outdoor Life	2
Skin Diver	5
Sports Afield	7
Sports Illustrated	1
Government (total)	**20**
Alaska Wildlife News	1
Connecticut Wildlife	1
Fish and Wildlife Today *(Minnesota)*	1
Minnesota Conservation Volunteer	3
Missouri Conservationist	2
Montana Outdoors	2
The Observer *(Delaware)*	1
Outdoor California	5
Shorelines *(Indiana's Lake Michigan Coastal Program)*	1
Wildlife Issues *(Mississippi)*	1
Wildlife Journal *(New Hampshire)*	1
News (total)	**50**
Anchorage Daily News (AK)	1
Baton Rouge Advocate (LA)	2
Buffalo News (NY)	1
Colorado Springs Gazette Telegraph (CO)	1
Daily News, Los Angeles (CA)	1
Denver Post (CO)	2
Desert News (UT)	1
Eugene Weekly.com (OR)	1
Greensboro News Record (NC)	1
Headwaters News (MT)	1
Houston Chronical (TX)	2
Peoria Journal Star (IL)	1
Knight Ridder/ Tribune Business News	2
Los Angeles Times (CA)	2
Minneapolis Star Tribune (MN)	3
Orange County Register (CA)	2
Orlando Sentinel (FL)	1
Outdoor News (MN)	1
Richmond Times Dispatch (VA)	1
Rocky Mountain News (CO)	1
Seattle Post-Intelligencer (WA)	1
St. Petersburg Times (FL)	1
Tampa Tribune (FL) 1	
The Corvallis Gazette-Times (OR)	8
The News Tribune, Tacoma (WA)	3
The Salt Lake Tribune (UT)	1
The Tennessee Tribune (TN)	1
The Wall Street Journal	1
Time	2
New Orleans Times-Picayune (LA)	5
USA Today	1
Association Publications (total)	**23**
American Forests	1
Audubon	3
Birder's World	1
Covertside	1
Living Wilderness	1
National Parks	5
National Wildlife	4
Natural Life	1
Outdoor America	3
Sierra	1
Wilderness Society	1

among these were Ted Kerasote *(Sports Afield),* George Reiger *(Field & Stream),* and Scott Stouder *(Corvallis Gazette-Times).*

Authors of the 126 articles referred to human population in one of three ways: as numbers of people and rates of growth, globally or locally; as numbers of people moving to or visiting a particular area; or, without numbers, such as "more park visitors," "more anglers, "more hikers," etc. Human population growth was the primary theme in just 21of the articles. Usually, population was mentioned in a paragraph or a single sentence in the context of the whole story. Other population-related issues that writers referred to were development or sprawl, habitat loss, pollution or contamination of air or water, deforestation, and human-wildlife interactions. More than half of the articles (75) proposed some sort of a solution to the problems that they identified. Only 15 articles said the solution was to stabilize population growth. Most solutions addressed other things people could do, such as protecting habitat or better managing land or wildlife resources.

Ted Kerasote, author of seven of the articles, exemplified the small group of population champions. He used specific human population statistics such as, "Every 14 seconds, one person is added to the population of the U.S." (*Sports Afield,* October 1997). In addition to the impact of population on the future of hunting, he discussed global issues of habitat, food production, scarce amounts of arable land, falling water tables, and increased need for infrastructure.

In proposing solutions or actions, Kerasote proposed some that were conceptual or philosophical. For example, he wrote, "We might begin by putting aside our denial about population growth and admit that it is a conservation issue" (*Sports Afield,* October 1997). In "The Overpopulating of America," (*Sports Afield,* January 1993), he suggested that empowering women and giving them a say in planning their families would lead to population stabilization. Kerasote also proposed some direct, practical solutions such as removing tax incentives or instituting negative tax incentives for families with more than two children and investing more money in family planning and educating women. In "People Pressure," he reported that, "Education and economic security in the developing world have been shown to translate into people having fewer children" (*Sports Afield,* October 1997). Other authors who were willing to tackle population directly echoed such themes.

In all, the articles were grouped into 17 categories of activity or interest. Nine were actual sports or recreation activities. Eight were related to the outdoors, wildlife, and wilderness. What follows is a brief summary of the articles in different categories of recreation or conservation activity.

Hunting: Twenty-five hunting-related articles appeared in all major publication types. Seven specifically referred to human population growth rates, such as: "The No. 1 problem is not habitat; it's people.... There are three new humans added to the world every second" (Ron Schara, *Minneapolis Star Tribune,* 2002). The others made more general references to population, such

as, "Our escalating human presence is rapidly consuming the West's last wild land, as well as its capacity for wildlife and hunting," (Scott Stouder, *Corvallis Gazette-Times,* 1997). Many discussed habitat loss or fragmentation or overdevelopment and sprawl more than human growth. Of the 16 articles that suggested some sort of solution, only two dealt with population. Other solutions included better land-use planning, using conservation easements to set aside wild lands, shortening hunting seasons or decreasing bag limits to ease pressure on dwindling game species, and using fees and taxes to establish refuges and preserve habitat.

Fishing: Human population growth was the main theme of three of 20 fishing-related articles. Other articles mentioned human population in relation to erosion, decline in fish populations, the need for different fisheries management practices, the future of fishing, and the effects of population on fishing as a livelihood or recreation. These articles referred to population growth in the Gulf Coast region, in Minnesota, or in the world. Some fishing articles did not contain direct references to human population. These were about issues related to human consumption and disturbance, such as mercury contamination, climate change, and wetland destruction.

Wildlife and Wilderness: Twenty-six articles focused on three related categories: wildlife protection, wildlife management, and wilderness preservation. Twelve articles included population figures. Two proposed population-related solutions—one included greater access to family planning and health care. Other solutions proposed in these articles included wildlife reserves for rare species and habitats, public education about sensitive areas, and better land-use planning to confine development and sprawl to areas that are already settled.

Conservation: Eighteen articles addressed a wide variety of conservation themes. Twelve stated specific population figures—either in total numbers of people or rates of increase. Most of the articles addressed population in the United States in general or in particular states or communities. Major issues of concern in these articles were development or sprawl, pollution or contamination, wetland damage, deforestation, erosion, habitat, and global warming.

Solutions were suggested in 11 articles that addressed both population stabilization and reducing consumption. In a July 5, 1987, article in the *Minneapolis Star Tribune,* Bob Schranck advocated stabilizing U.S. population by revoking incentives to have large families, providing universal sex education and population education, and establishing control of international borders to limit immigrants. Miguel Bustillo and Kenneth R. Weiss, in a March 24, 2004, *Los Angeles Times* article, suggested that rather than "pulling up the drawbridge on immigrants" to ease population and environmental concerns, California should institute smarter urban planning and place increased emphasis on conserving resources.

Conclusions

From this review, we can draw some conclusions about writing about population growth in the outdoor press.

Population growth is an established topic when writing about the outdoors. Our sample shows articles going back to 1980, with more than five in each year after 1997.

The issue is relevant to many different types of publications and organizations, including both national and local audiences. It is identified with many types of outdoor recreation and related interest areas.

It is far more likely for journalists to address population as one of a number of issues than for them to make it the main focus of the article. The issue also tends to be addressed more in editorials or commentary writing than in news reporting.

The overarching concern of all of the study articles is that the natural world no longer provides the recreational opportunities, habitat, or sustenance it once did. Reasons for the loss differ between the United States and Third World countries. In the United States, population growth, either in total or in a particular state or region, was stressed along with consumption issues—such as living in larger houses, creating more waste, and using more land and water resources. In the developing world, dominant issues were lack of water, increased demand of resources such as forest products, and increased demand for and lack of arable land on which to produce food.

Good Hooks

Here are some story ideas that writers could use as entry points for discussing human population growth, its relationship to the natural world, its impacts on conservation and outdoor recreation, and avenues to take effective action. The ideas come from various outdoor writers with whom we have worked on this project. Even if these issues aren't right for your audience, they show you how to connect the population angle to various topics.

Get local by going national: The best way to make a local story meaty is to show how something that is happening in your community, such as sprawl, relates to a larger national trend. Weave national and international statistics about population growth into the story.

Development trends in your community: Every county in the United States has a planning staff. Visit with the local planners about development trends in your community to give readers a better sense of what the landscape might resemble in years and decades ahead. Planners can help you put together a map of what land has been subdivided, at what density, and how it relates to areas of the countryside that have been beloved by generations of sportsmen and women. Often, citizens fail to realize that while land appears open today, there is already an invisible grid of development superimposed upon it. This can be eye-opening for readers.

Then and now: Interview several generations of sportsmen and women about favorite hunting spots around your town and how they've changed. Then visit with your local state game warden and ask about the number of hunting and fishing licenses being issued, how it relates to years past, what fish consumption advisories exist and why, how local wildlife populations are faring, what species are rarer today than a generation ago, and why? You can beef up your story by turning to the U.S. Fish and Wildlife Service's statistical census on the number of hunters and anglers in America and the economic value to your state. Your local land trust is another excellent resource for information on the value of trails, green spaces, and wildlife habitat to the local economy.

Roadkill: While it may be an unsavory subject for some, dead animals along the highways are highly visible and increasing due to the population/land-use connection. Your state wildlife management agency and the state or federal Department of Transportation keep information on the number and kinds of animals killed along highways. Revisiting the statistics annually provides good fodder for a series of broader stories about wildlife and habitat on the landscape, and how population growth plays a role.

An ecological-economic profile of your town or county: The Sonoran Institute has developed a user-friendly Economic Profile System that allows journalists who visit the organization's Web site—www.sonoran.org—to amass a 20-page eco-demographic profile of any community or county in the United States using statistics provided by the U.S. Census Bureau and other government agencies. The customized information empowers writers to take a revealing look at local socio-economic trends in their town, and to delve deeper into the effects that development has on natural areas.

The cost of growth: We all accept that growth is good or at least inevitable. But what does the future truly look like with ever-expanding growth? Does your town or county know when growth will end? Where will people be located? What will it cost and who will pay for it? Cost of Services studies, first pioneered by American Farmland Trust (AFT), look at the real costs of sprawl on the wallets of local taxpayers. AFT has a publication that aggregates several Cost of Service studies, which give reporters an opportunity to match up their communities with places where studies have already been done. The studies provide readers (including hunters and anglers) with a better sense of the trade-offs between development and landscape protection. Often, the largest land-grant university in your state will have professors and researchers on staff who are examining the impacts of sprawl on the rural countryside. These folks can provide great insights.

Moving in, moving out: Call U-Haul (or another moving company) to capture a few fascinating anecdotes for your story. The local office or the company's national headquarters can have information on the number of rentals or drop-offs in a given locale. Roughly speaking, rentals provide clues to people moving out of an area, while drop-offs indicate the number of people moving into an area.

Loss of access: Access to all types of recreation is becoming more restricted as populations and their demands grow. Find out from deer hunters how far they have to drive to find an unposted property. Ask anglers about how many more people they're seeing on streams and lakes.

Migratory species: Migratory birds are affected by population growth and land use not just in the United States, but also in other countries. Waterfowl, which are of particular interest to hunters, are very closely tracked by the federal and state governments through annual surveys. If waterfowl numbers are declining in your area, tackle the story by broadening it to include the birds' entire range. What are the population and development pressures affecting them in Canada and Central America? How is their flyway changing?

The pros and cons of population growth: How do communities weigh the values of wildlife and habitat as compared to the population-driven needs for schools, roads, housing, and a stronger tax base? How can natural values be measured in financial and other ways so that they can be compared? Interview local land-use planners when a new subdivision is being built. Ask them how much it will cost taxpayers to provide the necessary infrastructure and public services. Find out how this compares to revenues from current land uses (property or income taxes from farms or forests, or dollars spent at local businesses by outdoor recreationists).

International hunting and fishing: Safari hunting in Africa or bonefishing in the Caribbean depends on productive wildlife ecosystems in countries where human communities literally compete with wildlife for the resources and population continues to grow. Can sportfishing and big-game hunting hold up? Can sportsmen make positive contributions that help people in other countries meet their needs so that natural resources aren't exploited?

Saltwater fishing and recreation: Coastal areas are growing in population faster than anywhere else. Human impacts are affecting fish, coral reefs, wetlands, and estuaries. If you have coasts in your area or many readers who visit coastal spots for vacations, find out what the population-related impacts have been and how recreation may be suffering.

Endangered shooting ranges: Habitat for shooting sports becomes imperiled as suburbs push out, bringing safety issues and anti-gun sentiments. Find out if any ranges have closed or are threatened in your area. Are any gun clubs taking steps to protect their land from encroachment?

Don't Compromise Your Conscience

By George Reiger

Ecologists and outdoor writers are, by the nature of our work, more aware than most people of the worrisome consequences of human overpopulation. But whereas the ecologist's awareness is based on scientific data arising from such phenomena as global warming, shrinking rain forests, and the ever-escalating extinction of species, outdoor writers have a more personal perspective: We witness the decline or obliteration of many prime hunting and fishing spots due to endless road building and suburbanization.

As more and more people compete for less and less optimum open space, virtual recreation is replacing genuine "re-creation." Participatory sports, like hunting and fishing, have become spectator events for thousands who spend more time watching the televised adventures of famous fishermen and hunting celebrities than doing it themselves. A new computer service even makes it possible for shooters online to pull the trigger on a proxy gun and kill a real animal many hundreds, even thousands, of miles away. As for enjoying a reflective afternoon on an undeveloped lake or stream—the kind of outing we once found less than an hour from home—we must now pay outfitters a premium price for guided experiences in remote regions.

It's ironic that the words "ecology" and "economy" have the same eco- prefix—derived from the Greek word *oikos,* meaning "home" or "habitat." In nature's eternal struggle between continuity and change, ecologists favor the former, while economists are more taken with the dynamics of change. Specialists in both fields insist that diversification—whether in biological species or an investment portfolio—is the key to sustainable well being. But the Nobel Prize for the study of *oikos* goes to economists, not ecologists; and our culture continues to ask itself, "How am I doing?" on the basis of how well we accumulate material goods, not by how well we sustain nature's variety and abundance.

Beginning in 1975, I used my monthly conservation column in *Field & Stream* magazine to publicize the adverse impacts of an ever-swelling but ecologically ignorant population. On several occasions, I cited the latest figures from the Population Reference Bureau to point out that in the X minutes it took to read a particular column, the net population of the United States had increased by Y amount (always more than a thousand people). These people would have to be fed, housed, clothed, and hopefully educated, and they would grow up desiring to spend some quality time in unspoiled nature.

In 1978, I initiated *Field & Stream's* Dumb-Dumb Awards for public agencies whose policies provided especially egregious examples of a refusal to acknowledge that every day something must die so that each one of us can continue living. I made my final Dumb-Dumb presentation in 1983, by which time

the publisher felt the concept had exhausted its novelty value. He also felt such awards were too negative—that he'd sell more magazines, and that I'd persuade more readers to develop their "conservation consciences," with a less sardonic approach to environmental problems.

The publisher was partly right. Conservation activism may begin with an exposé, but the matter can only be resolved through the kind of friendly persuasion that leads to genuine reform. Yet how does a journalist put a positive spin on conservation's most crucial question: How many people can the Earth support at what standard of living?

Although writers attempting to raise this question can hardly be expected to illustrate their points with "happy faces," they shouldn't radiate pessimism either. For one thing, nobody likes reading pessimistic prose. For another, we're all in this together. Either we seek communal solutions, or we'll end up documenting defeat.

As journalists, we should also remember that conservation, like politics, must be perceived as local. For example, the current debate over drilling for oil in the Arctic National Wildlife Refuge is ultimately about stopping frivolous uses of this nonrenewable resource or continuing to have fun, fun, fun until daddy takes the T-bird away. But for most Americans, ANWR is a remote place they'll never see. How do you get them to care? For one thing, you can undermine the freedom-from-foreign-oil fantasy by pointing out that by merely raising the miles-per-gallon standard for all SUVs registered in California, we can save more oil each year than what could be extracted annually from ANWR, even using the industry's highest petroleum-reserve estimates. Writers with regional audiences in, say, New England or the Midwest could crunch numbers to come up with local combinations of states equivalent to the California model. The important thing is to make the problem pertinent to readers who never before considered themselves to be involved.

Journalists too often use their profession's claim of "neutrality" as an excuse for laziness. It's easy to report that a spokesman for one side said this and a spokesman for the other said that, and leave it there. It's much harder to exercise the little gray cells and come up with ways to make complex issues comprehensible to readers who have dozens of other concerns demanding their attention. When the issue is compounded with political sensitivity—as is the population time bomb—writers must make extra efforts to get ordinary people to care. And those efforts must begin with each writer recognizing his or her own vital stake in the outcome.

George Reiger *is conservation editor emeritus for* Field & Stream *magazine and a federal commissioner for the Interstate Commission on the Potomac River Basin. He has written hundreds of articles and more than a dozen books on natural history and outdoor recreation including the Pulitzer finalist,* Wanderer on My Native Shore.

Make the Issue Relevant

By Todd Wilkinson

Great stories, the ones that give us a framework for understanding our place in the world, are all around us. They are present in the local woodlots and farmer's fields where we hunt. They are in the waterways where our kids fish and swim. They're along the golf course fairways and trailing through the rough. They're at the supermarket, in restaurants; at the Big Box stores in the strip mall, through the windshield as we commute to work.

As outdoor columnists and journalists, hardly a story we write isn't related, somehow, to rising numbers of *Homo sapiens* and to our own corresponding consumption of natural resources.

Yet for many urban North Americans (which these days pertains to most of us), the concept of human "overpopulation" remains an abstraction, a phenomenon that seemingly applies only to impoverished nations in the Third World. During my 20 years of writing about conservation in the United States and abroad, I've confronted this insular attitude time and again, along with the ironic transgenerational lament, "Things just ain't what they used to be."

Indeed, they're not. Nor is our connection to nature the same as it was for our recent and distant ancestors. We need nature more, yet we relate to it less. Our challenge, as writers, is to re-tether readers to the land in ways that enable us and them to make sense of change.

That's why I applaud what the Izaak Walton League is trying to do—to help journalists figure out ways of telling better, more meaningfully conservation stories originating at the local level. Understanding change is the first necessary catalyst involved with taking action to improve the world.

Whether one is capable of seeing it or not, sprawl is the watchword of our time, though the narrative can be crafted in a number of ways. There's plenty of fodder if we're willing to work a little harder and delve deeper into the indicators on the surface.

Modern Americans are moving to the edges of wild places in greater numbers than ever before. While the demographic trend of the 20th century was characterized by a migration of rural folk into the cities and suburbs for economic opportunity, this century is commencing with a dramatic shift in the other direction. The new migrants, both retiring baby boomers and young couples starting families, are placing greater value on aesthetic quality of life.

The beauty of nature is pulling urbanites back into the rural countrysides. This isn't so much an issue of overpopulation as it is a matter of humans resettling en masse into fragile environments, dramatically overwhelming the natural processes that make those places biologically rich.

How each of us assesses the question of overpopulation—is it "good" or "bad"—is ultimately a subjective judgment; but the effects of population are

not. They can be quantified, imbued with meaning through context, and reflected upon.

Wildlife and habitat are two valuable measuring sticks in our accounting method. In a recent report compiled by a trio of national conservation organizations, it was estimated that over the next quarter century, more than 22,000 acres of wildlife habitat will be lost to development in 35 of America's largest and most rapidly growing metro areas. Almost half of the country's species considered most "at risk" to extinction or extirpation—about 1,200 different kinds of wild plants and animals—reside in those settings.

But it isn't enough to simply publish numbers on how many life forms or acres of wetlands or groves of old-growth forest are being lost to asphalt pavement every minute. We must help our readers understand what it means.

Yes, population is an issue; so is its twin sibling of sprawl. But it's the patterns of growth that are transforming the wild fabric of landscapes and having profound impacts on our relationship with the outdoors. "A lot of facts and figures are out there if you know where to look for them, though the real stories reside in the patterns they create," says Dennis Glick, a nationally recognized private lands conservation expert. "When you put the information together, it paints an alarming picture of the impacts that poorly planned and rapid growth is having on our wildlife resources," he adds.

Glick previously worked in the tropics for World Wildlife Fund and helped establish a system of conservation reserves. For the last 15 years, he's been examining the relationship between population growth and its affects on some 15 million acres of public land around America's bellwether ecosystem in the Lower 48, the greater Yellowstone.

Two converging forces define the greater Yellowstone ecosystem, which resides in my backyard. With the recent restoration of gray wolves, it again is home to every major species of large mammal that existed here at the end of the Pleistocene. A remarkable accomplishment. However, reflecting the trend of human resettlement mentioned above, the 20 rural counties that surround Yellowstone National Park are among the fastest growing in the United States.

Every wildland setting in the Lower 48 adheres to a similar script of constriction. Pick an area that is closest to you: the arid deserts of the Southwest; the ancient forests of the Northwest; mountain towns in the Rockies; cities of the heartland; the booming metropolises in the South and Appalachian regions; states girded by the Great Lakes; suburbs sprouting around the Florida Everglades; the once quaint hamlets of New England; the increasingly subdivided North Woods of Maine; the beaches of Hawaii; and the former wilderness hinters just beyond Anchorage.

One of the pervasive myths, perpetuated by some developers, is that towns and counties can have it all—prosperous economies and robust natural landscapes. Free-market boosters say that civilization can expand unchecked without consequence to the aesthetic assets that make our communities special. It's

a sanguine preconception, except that when pressed by we reporters, few authorities connected with the real estate industry can cite a single example of where such utopian balance exists.

I love to hunt and fish. In my home valley, the sprouting of subdivisions on elk winter range, for example, has led first to the cancellation of rifle hunting season (a tradition going back to the first pioneers), then the cessation of muzzleloader and shotgun hunting for big game. Next, within a generation or two, it may result in the extirpation of the wapiti themselves, or at least a huge reduction in their numbers as the herd loses access to vital preferred grasslands.

The loss of hunting opportunity here—and a cherished way of life—has nothing to do with animal-rights activists battling the NRA or gray wolves annihilating prey. This is a conflict that emanates from poor planning and zoning. Wildlife and habitat are a means for telling a larger story. Animals are tools for holding society accountable.

Everywhere we turn, the media is under fire for being allegedly slanted in its reporting. But the truth is, there's nothing wrong with that, as long as journalists reflect upon the values that are important to us and share them with our readers.

Yes, we are journalists, but we are also mothers and fathers, daughters and sons, citizens and neighbors. Most of us wouldn't be in this profession if we didn't care, and we certainly wouldn't be outdoor writers if we believed that having wild things in this world doesn't matter. Does that make us biased? I should hope it would.

For two decades, ***Todd Wilkinson*** *has worked as an award-winning journalist and author, writing stories about conservation in the American West and around the world. Currently, he is a Bozeman, Montana-based correspondent for* The Christian Science Monitor *and a freelance magazine writer with credits in a dozen publications. A lifelong hunter and angler, he also is author or contributor to 14 books, including the critically acclaimed* Science Under Siege: The Politicians' War on Nature and Truth, *which chronicles the stories of government whistleblowers working for natural resource agencies.*

Sensible Solutions

Coming to terms with population growth is perhaps the most daunting challenge we've ever faced. But humans, more than other animals, are capable of predicting and averting disaster. One key to dealing successfully with the population issue is to give people confidence that their actions can make a difference.

There is no "silver bullet" solution to overpopulation. Stabilizing population growth and easing migrations requires working on a broad array of solutions that can contribute to sustainable development. Fortunately, there are sensible, effective actions that people can take while respecting the values, conscience, and cultures of individuals and nations.

Voluntary family-planning education and services

One proven solution to stabilizing population growth is to provide effective, inexpensive family-planning services that are approved by doctors and nurses the world over. This consists of providing women and men with access to information and services so that they can plan the number of children they want and when they want to have them.

Thirty years of experience has demonstrated that when women understand their options and have access to modern methods of family planning, they generally choose to have smaller families. Demographers credit access to family-planning with 40–50 percent of the decline in fertility rates between 1960 and today. Voluntary population programs work, but our efforts to date have not been sufficient. Today, 137 million women want to delay their next birth or avoid another pregnancy, but they are not using family planning.[19] Globally, more than 350 million couples still lack access to a full range of family-planning services. It is estimated that demand for family-planning services will increase 40 percent by 2025.[20]

We must also realize that access to family planning means more than having a health clinic nearby. Poverty, lack of education, and the fact that women often do not have full control over decision-making are all important factors. Fertility and unintended pregnancies rates are higher in communities that lack educational and economic opportunities. Conversely, girls who stay in school longer have children later and have fewer children during their lifetimes. They are also better able to support the children they do have. Understanding this, health practitioners and community development specialists agreed on an integrated approach to population and development in 1994. Their aim was to address economic opportunity, education, health care (including family planning), women's equality, and conservation comprehensively.

Though the United States has been a leader in supporting international population programs for 40 years, our funding since 1995 has declined 30 percent

in real dollars. In that decade, the world has added 680 million people.

What can your readers do?

First, they can tell elected officials to provide adequate financial support. Surveys document that 80 percent of Americans support population programs. But when it comes time to authorize funding, their voices are not sufficiently heard. Citizens need to make their views known by contacting elected officials to urge support for voluntary family planning in the United States and internationally. Conservationists and sportsmen have the chance to make a particular contribution since they are not the "usual suspects" who debate this issue.

Second, they can support non-government agencies that are at work on the ground. While government has the financial muscle to match the need, much of the fieldwork is done by nonprofit groups of all kinds. Some are conservation groups that are concerned about population growth and have designed integrated and effective programs in developing countries. Supporting such groups with time or money not only addresses the need directly, it also lets people feel connected to those they are helping.

Learn to grow better, not bigger

Local government planners and the citizens they serve routinely assume that growth in population and jobs are essential to a healthier economy and quality of life. However, throughout the United States, communities are discovering that a more accurate accounting of the costs of development and the value of conservation gives a different picture. New tools are being developed that provide a clearer picture.

Assess the costs of growth

Since World War II, we have constructed a system that makes building houses on farm fields seem like the logical thing to do. Tax codes, business and road subsidies, and high demand for large spaces and scenic views create incentives for developers and landowners to develop working lands and open space. Public officials who are looking for better tax flows to pay for services encourage the spread.

But homes and businesses built on green fields need infrastructure like roads, utilities, and sewers. Their residents also expect top-quality public services such as fire and safety, schools, recreation, trash pickup, and snow plowing. All this adds up to a heavy price tag that is rarely covered in full by either the developer or the new buyer. Instead, the existing residents foot the bill.

A new study from the Brookings Institute calculates the cost of supplying infrastructure to a one-acre home at $90,000 and a five-acre home at

$130,000.[21] Based on the Brookings Institute findings, the *Columbus Dispatch* estimated that central Ohio will need to pay more than $17 billion in utilities and government services if half of the new homes anticipated by 2030 were built on one-acre lots.[22] The American Farmland Trust has been conducting "cost of community services" surveys in communities around the country for the last 20 years. Their findings document that residential development costs, on average, $1.15 in public services for every dollar of tax revenues it generates.[23]

Assess the value of conservation

As more land gets developed, the value of forests, farmlands, and wetlands becomes more apparent. Cleaning the air of pollution, absorbing rainfall, preventing flooding, and filtering ground- and surface-water are public benefits whose value is becoming more measurable. In 1990, New York City faced a $6 billion price tag for a water filtration system to remove silt and contaminants that farmland protection and better land management ultimately took care of.[24]

Open land not only provides services that are costly to duplicate, it also contributes cash to the economy. Parks help to increase the value of adjacent real estate. When hunters and birdwatchers visit rural areas for a day in the field, they patronize local businesses, adding dollars to the economy and taxes to the government. The U.S. Fish and Wildlife Service estimates that people engaged in outdoor recreation spend $70 billion nationwide each year.[25] As communities look ahead to their future growth, sound cost assessments of the value of undeveloped land can help level the playing field when considering conventional economic development versus more environmentally friendly alternatives.

What can your readers do?

First, they can ask planners and elected officials the tough questions. What growth rates do they expect to see, what are the associated costs estimated to be, and how will these costs be covered?

Second, they can demand accurate cost-benefit analysis of development projects and the long-term tax implications for existing residents.

Third, they can get involved in land-use planning decisions.

Finally, they can become involved with decisions about local growth. Outdoor recreationists can have a direct impact on preserving what they value simply by getting involved early in the planning process. Joining zoning boards and master-plan committees or commenting on proposed legislation is preferable to fighting developments one-by-one.

Focus on the facts

If one thing is certain, it is that discussions about population issues, immigration, and sprawl are emotional subjects that can cause heated disagreements. Opponents in the battles that can rage at a local or a national level generally stake out strident and inflexible positions based more on ideology than fact and reason. One way to try to achieve reasonable dialogue is to keep the focus on facts and science.

Review the Resources Section of this publication for suggestions on where to get information. Useful information regarding population, land use, economic and environmental costs and benefits, and much more is collected by public agencies at county state and national levels, academic departments at most universities, and conservation nonprofit organizations. Conservation groups like the Izaak Walton League of America can often help citizens to navigate the maze of such information.

Resources Section

The Izaak Walton League of America's Sustainability Education Program has information on population, conservation, and outdoor recreation. You can sign up to receive e-mail Action Alerts on legislation and policy issues, as well as *Sustainability Communicator,* a quarterly newsletter on sustainability and population issues. Contact the League at www.iwla.org or (301) 548-0150.

The organizations and publications listed below can provide additional information on issues related to population and natural resources. The list is by no means exhaustive, but it provides a good starting point to learn more about the topics covered in this publication.

DEMOGRAPHY

Population Reference Bureau produces regular reports, newsletters, and fact sheets on population related issues. This includes background kits on demographic issues for individual countries. www.prb.org, (202) 483-1100.

The **U.S. Census Bureau** is a federal agency that compiles facts and statistics about U.S. population. The Bureau also has information on global and international demographics. www.census.gov.

State population information is available from the Census Bureau http://quickfacts.census.gov/qfd/states/00000.html and generally from one or more state government departments or the state university. Typing the name of your state and "population statistics" into an Internet search engine will usually pull up www.your state.gov and one or two other references.

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IMMIGRATION

National Immigration Forum: A moderate group of mainstream business, religious, and immigrant-rights organizations. Their site provides information on the reform debate and immigration statistics and policy. www.immigrationforum.org.

Assessing Immigration, Population and Environment. A balanced treatment of the subject available from "The Why Files: The Science Behind the News," University of Wisconsin. http://whyfiles.org/200immigration_pop/

POPULATION AND ENVIRONMENT

The **Environmental Change and Security Project** explores the connections among population growth, water scarcity, degraded ecosystems, forced migration, resource depletion, pandemic disease, and their links to conflict, human insecurity, and foreign policy. http://ecsp.si.edu.

Population Connection produces factsheets, publications, and curricular materials on population and consumption issues. www.populationconnection.org, (202) 332-2200.

The **U.S. Fish and Wildlife Service** compiles statistics on subjects such as participation in outdoor recreation, attitudes toward outdoor recreation, and wildlife populations. http://www.fws.gov/, (800) 344-WILD. For the National Survey of Fishing, Hunting, and Wildlife-Associated Recreation, go to their Web site at http://fa.r9.fws.gov/surveys/surveys.html.

Environmental Writer. An online publication that focuses on environmental and natural resource journalism, with a special project to report on population in environmental journalism. www.environmentwriter.org.

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LAND ISSUES AND GROWTH

The **U.S. Environmental Protection Agency's Smart Growth Office** provides a variety of information on environmental issues related to land use and planning. http://www.epa.gov/livability/, (202) 566-2878.

The **U.S. Geological Survey** is the federal source for science about the earth and its resources. Extensive publications, online maps, and links to information about land use and the environment can be found at www.usgs.gov.

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REPRODUCTIVE HEALTH

The **Alan Guttmacher Institute** produces reports and factsheets on reproductive health and related issues in the United States and abroad. www.agi-usa.org, (212) 248-1111.

Planetwire is an online newsroom with regular stories, facts, and analyses of issues related to population, international family-planning assistance, reproductive health, and the environment. www.planetwire.org.

The **United Nations Population Fund** offers a range of publications on reproductive health, gender equity, and population growth. UNFPA also publishes an annual report, *The State of World Population,* which provides in-depth coverage of population-related trends in health, education, environment, poverty, and development. www.unfpa.org.

ECONOMIC DEVELOPMENT & FOREIGN ASSISTANCE

The **Sonoran Institute** assists communities in western North America on economic and conservation issues. Their free online service provides economic profiles for communities and counties on long-term trends in population, economics, transportation, and agriculture. www.sonoran.org, (520) 290-0828.

InterAction is a consortium of international development organizations. InterAction produces reports and newsletters on U.S. foreign assistance and foreign policy. www.interaction.org, (202) 667-8227.

The **U.S. Agency for International Development** (USAID) is the primary federal agency responsible for distributing U.S. development assistance. It produces regular factsheets and publications regarding women's reproductive health status and the effects of U.S. investments in reproductive health and family planning in developing countries. www.usaid.gov, (202) 712-4810.

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Notes

Visit us on the Web at
www.iwla.org

The Izaak Walton League of America
Sustainability Education Program
707 Conservation Lane
Gaithersburg, MD 20878-2983
Phone: (800) IKE-LINE
E-mail: sustain@iwla.org