STURGEON RIVER
STATE OF THE WATERSHED REPORT
MAY 2012

City of St. Albert **Office of Environment**
Green by nature

City of St. Albert
Cultivate Life

Photo Courtesy of Dave Conlin

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The purpose of the State of the Watershed Report is to summarize the current knowledge of the Sturgeon River Watershed and to comment on its environmental integrity. This report has been created for the City of St. Albert for use by all stakeholders in the watershed and provides the necessary information for a shared governance approach to watershed management decisions by regulators, policy makers, landowners and industrial users. The full technical document is available from the Office of Environment, City of St. Albert. Contact information is available at the back of this document.

WHAT IS A WATERSHED?

A watershed is an area of land that contains streams and rivers that all drain into a single larger body of water, such as a larger river, a lake or an ocean. A watershed has more than just water in it — it includes farmlands, cities, forests, grasslands, animals, birds, and even roads.

It's important for watersheds to stay healthy as we rely on them every day.

Cities and towns depend on watersheds for clean drinking water and household water use. Farmers and ranchers need the watershed to help irrigate their crops, and feed their livestock.

Business and industry rely on the watershed to run their operations. People rely on the rivers, lakes and streams for a fun place to fish, boat or swim; while plants, animals, and birds need the watershed to provide them with food and shelter.

We **all** live in a watershed, and everything we do impacts its health.

Interested in further information? Throughout this summary document, watch for connections to the Sturgeon River State of the Watershed Report technical document which will provide you with further details into each category.

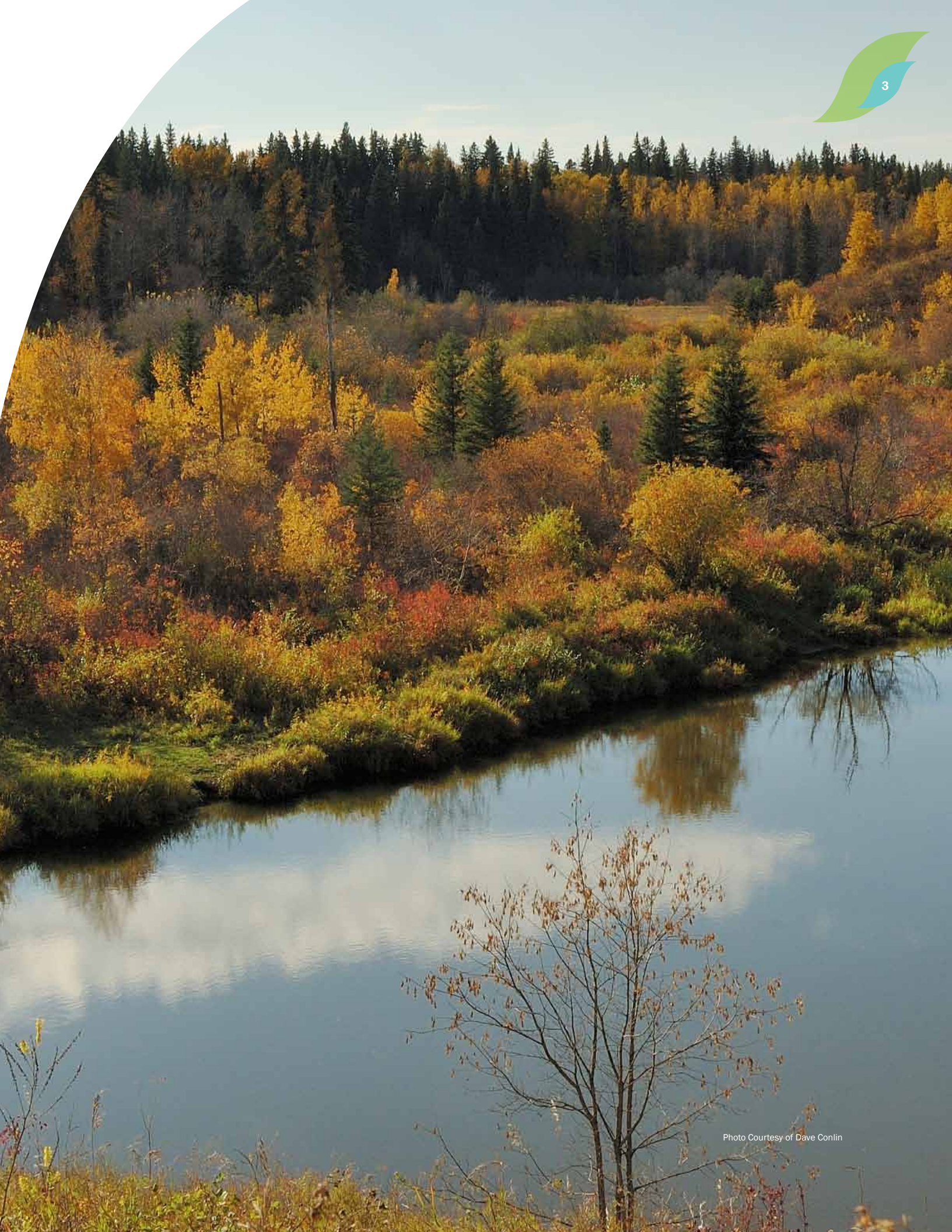


Photo Courtesy of Dave Conlin

STURGEON RIVER WATERSHED

- 3,301 km²
- 74.5% of people live in urban centres
- Developed areas (urban centres) make up 4% of the land
- 71% of land is under agricultural development (crops and pasture)
- About 20% of land is natural areas (forests, wetlands etc.)
- The remaining 5% of land is made up of roads (3%) and other developments (2%), such as oil and gas facilities, mines/quarries and landfills.

North bank of Sturgeon River, ca. 1950. Credits: Photography courtesy of Musee Heritage Museum, Helen Lindsay fonds.

OUR HOME – THE STURGEON RIVER WATERSHED

The Sturgeon River is a prairie river, fed only by the rain and snow that falls throughout the year. It starts at Hoople Lake, and flows east through Lake Isle, Lac Ste. Anne, Big Lake and empties into the North Saskatchewan River at the City of Fort Saskatchewan. Numerous cities and towns have developed along its journey. The river travels through fertile agricultural fields, open prairies, wooded forests and meanders through the traditional lands of First Nations communities.

The Sturgeon River Watershed covers 3,301 km^2. Along with First Nations communities, European settlements and missions were established along the watershed dating back to the 1800s. Today, the Sturgeon River Watershed includes the cities of St. Albert, Spruce Grove, the northwest corner of Edmonton, the communities of Bon Accord, Gibbons, Morinville, Onoway, Stony Plain, Calahoo, Villenueve, Spring Lake, the First Nations Reserves of Alexis 133 and Alexander 134, and portions of the County of Barrhead No. 11, Lac Ste. Anne County, Parkland County, Sturgeon County and Westlock County.

Hundreds of thousands of people rely on the Sturgeon River Watershed and most of the people, over 74 per cent, are found in urban centres. This is a unique challenge for the watershed. Compared to other watersheds in the province, population growth is higher than average in the Sturgeon River Watershed and continues to increase.

Outside the big cities and towns, the land is dominated by agriculture, with 71 per cent of the land either in crops or as pasture. Over 1,200 farms dot the landscape.

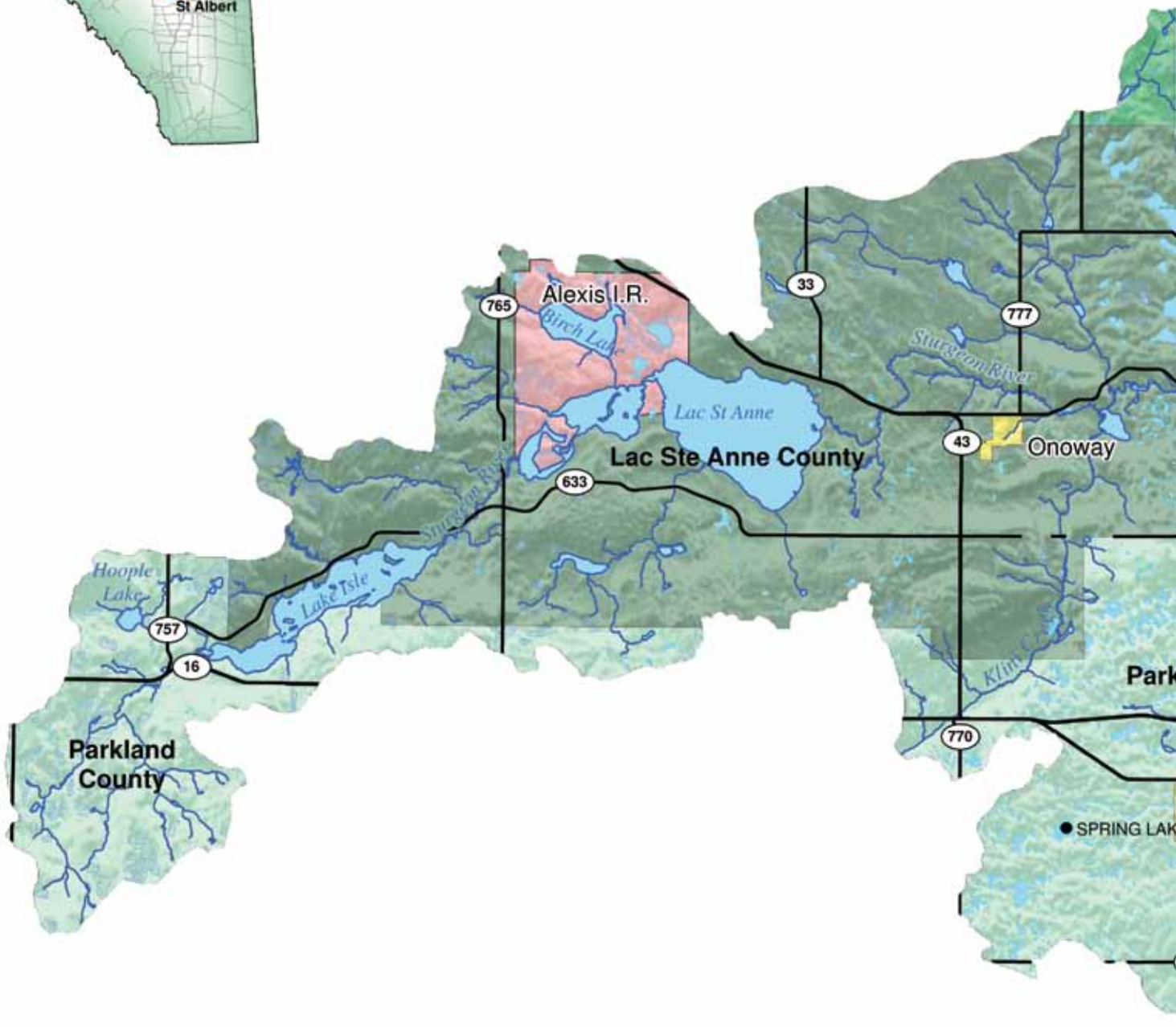
The Sturgeon River Watershed is home to many people, places and things. Visit section five of the Sturgeon River State of the Watershed technical document, Land Use and Social/Cultural Resources, for more information on the influences that population growth and agriculture have on the watershed.

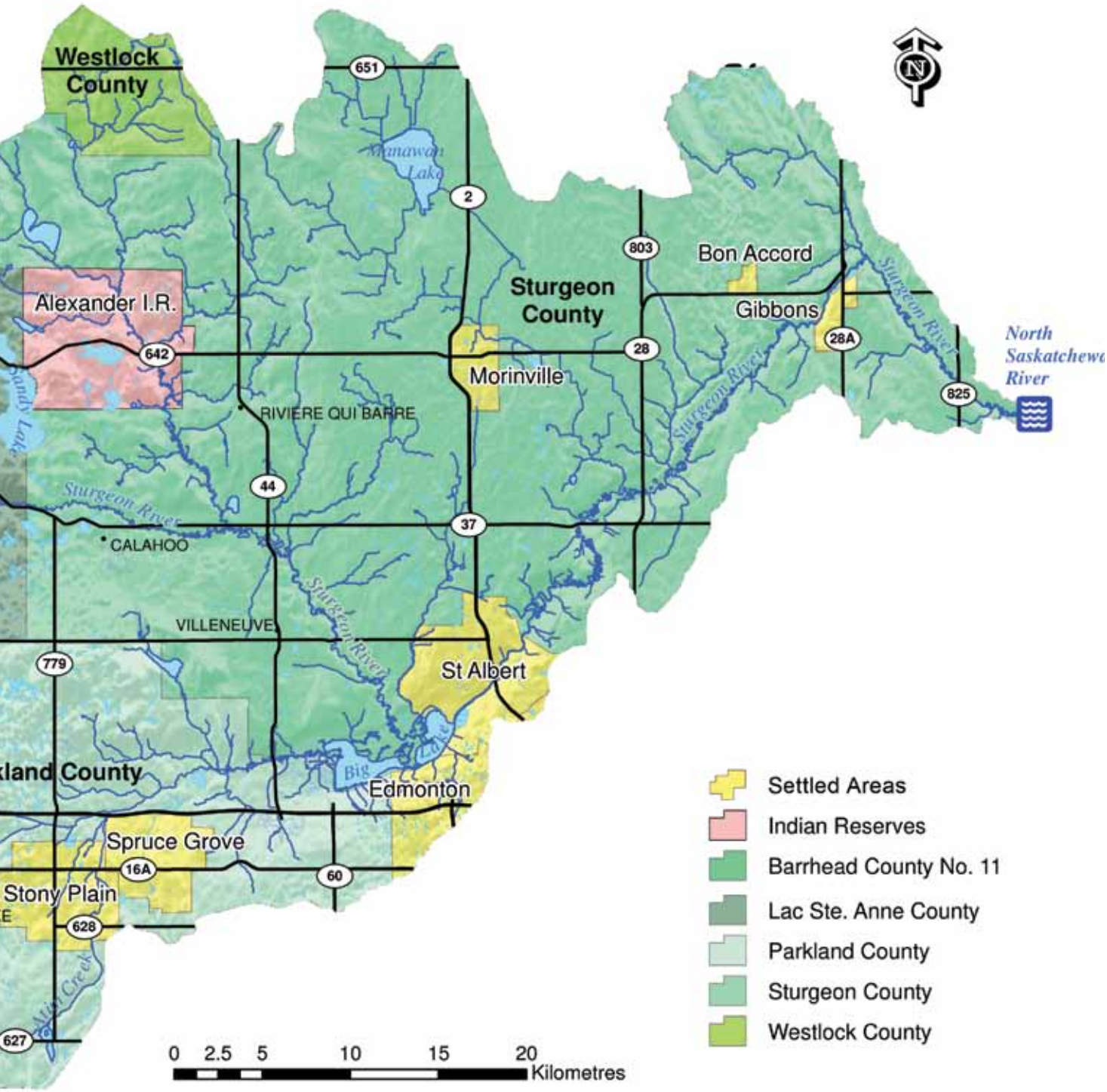
The Sturgeon River Watershed is named after the Lake Sturgeon, a fish that is typically found in the North Saskatchewan River but historically travelled up the Sturgeon River to feed.

Fish that are found within the watershed include: Walleye, Northern Pike, Rainbow Trout, Lake Whitefish, Burbot, Yellow Perch, Brook Stickleback, Lake Chub, White Sucker, Fathead Minnow, Iowa Darter, Spottail Shiner, and Pearl Dace.

The Big Lake Natural Area/Lois Hole Centennial Park is one of the most important bird habitats within the Sturgeon River watershed. Two hundred and thirty-five bird species have been reported in various studies from the Big Lake area, of which 77 per cent are believed to be regularly or annually occurring.

MAP OF THE STURGEON RIVER WATERSHED




Westlock County
651
Namawan Lake
2
803
Bon Accord
Sturgeon County
Gibbons
Alexander I.R.
642
28
28A
Morinville
North Saskatchewan River
825
RIVIERE QUI BARRE
Sturgeon River
44
37
CALAHOO
VILLENEUVE
779
St Albert
Big Lake
Edmonton
Spruce Grove
16A
60
Stony Plain
628
627
0 2.5 5 10 15 20
Kilometres
Settled Areas
Indian Reserves
Barrhead County No. 11
Lac Ste. Anne County
Parkland County
Sturgeon County
Westlock County

LEARNING ABOUT OUR WATERSHED

Our watershed is made up of many different pieces. Like a puzzle, you need to put all the pieces together to see the big picture. Over the years, numerous studies have been done throughout our watershed; however, certain information is still missing. Understanding the whole picture is called a watershed approach. It's a way to see how the land, water, plants, animals and people interact with one another, and how various actions impact the watershed.

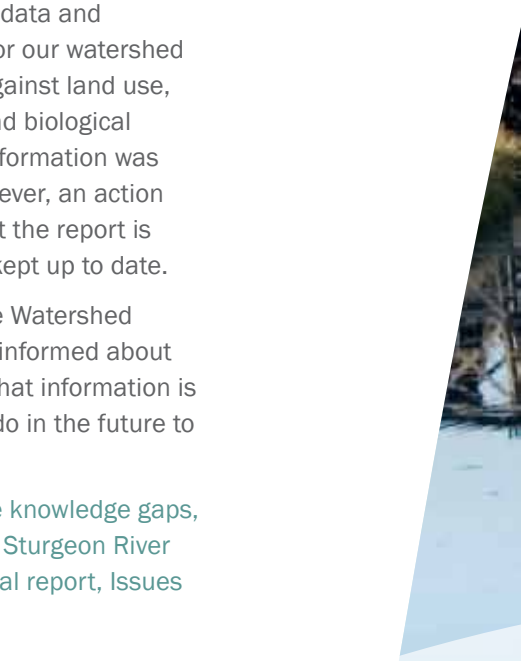
The Sturgeon River State of the Watershed Report is our first step in watershed planning under the Government of Alberta's Water for Life Strategy. It's through this provincial document that three goals were created that would ensure Albertans receive access to:

- safe, secure drinking water supplies
- healthy aquatic ecosystems, and
- reliable, quality water supplies for a sustainable economy

But in order to meet those goals, we need to better understand the health of our own watershed first. The numerous data and information already available for our watershed was collected and examined against land use, water quality, water quantity and biological indicator categories. No new information was researched for this report; however, an action plan will be developed now that the report is done to ensure information is kept up to date.

The Sturgeon River State of the Watershed Report helps us become more informed about the watershed, how it works, what information is needed, and what we need to do in the future to ensure its health.

For more information on the knowledge gaps, please see section eight of the Sturgeon River State of the Watershed technical report, Issues and Challenges.



WHAT KIND OF DATA IS MISSING?

The Sturgeon River State of the Watershed Report gathers a wide variety of information; however, we are still missing vital pieces of information or knowledge gaps. By identifying this information, we can better plan for future studies within our watershed. Significant knowledge gaps include:

- The lack of a comprehensive wetland inventory which would help us better understand wetland loss and its impact on the watershed;
- Riparian health information - only one study has been completed on a single water body within the watershed;
- A lack of long-term information on the Surface Water Quality Index as data has not been collected consistently;
- Information on watershed densities and distributions of aquatic macrophytes and benthic invertebrates. These are the plants and animals that live in the water and are important indicators of aquatic ecosystem health;
- The status of fish populations across the watershed. There is only detailed information for a select few water bodies.

WHAT MAKES A HEALTHY WATERSHED?

It's impossible to look at a river or a lake and tell if the entire watershed is healthy. Numerous factors go into determining what is healthy and what is not on both land and water.

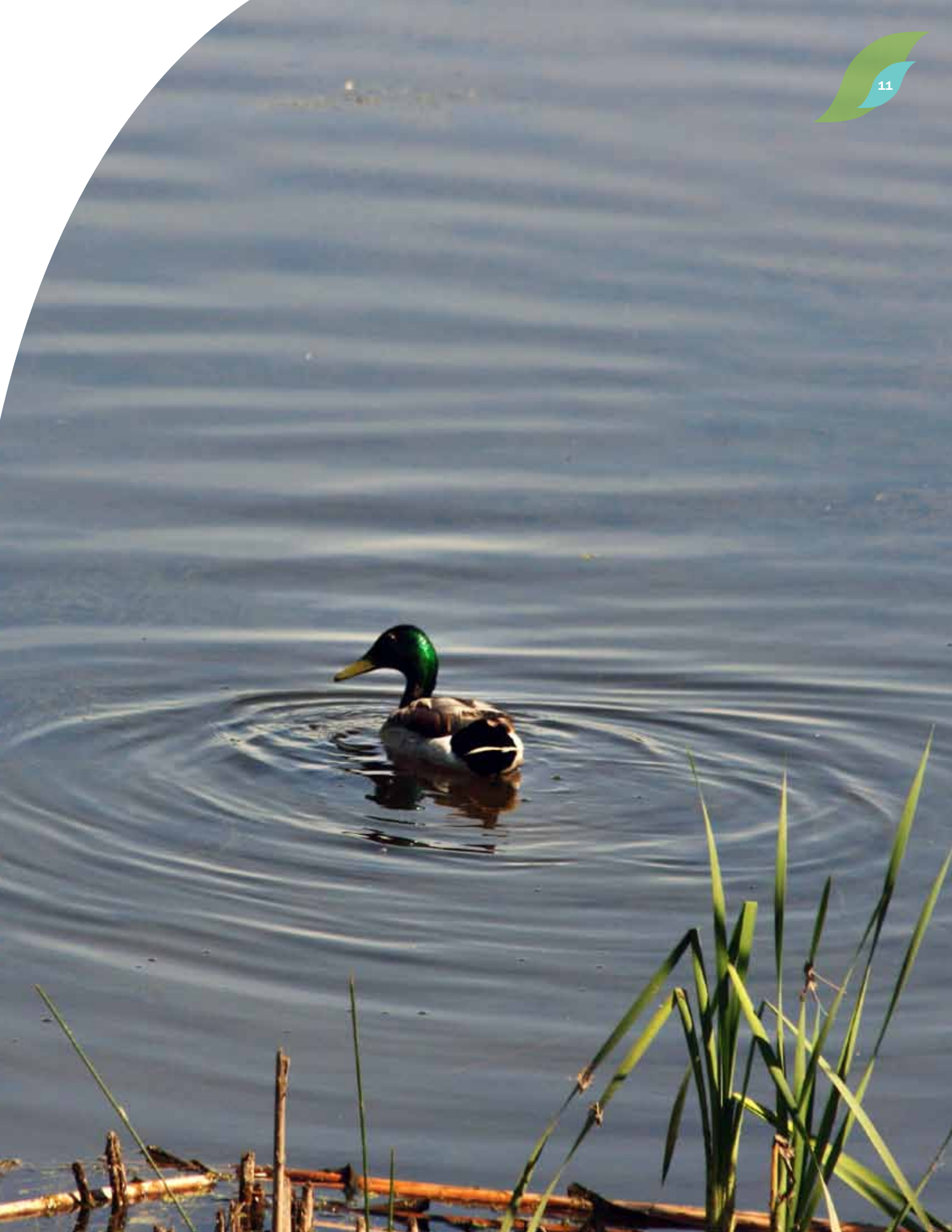
The Sturgeon River State of the Watershed Report reviews four indicator categories to help us assess our watershed's health. They are:

- land use
- water quantity
- water quality
- biological

These four categories are then further examined through the use of a variety of condition and pressure indicators developed by the Government of Alberta (Handbook for State of the Watershed Reporting). Condition indicators measure such things as water quality, water quantity, fish populations, density of roads, nutrient levels, etc., against scientific standards. Pressure indicators measure factors that could potentially impact a watershed's health such as human population, livestock operations, water allocation among others.

These indicators, developed by the Government of Alberta, are designed to help watershed groups similarly assess the health of watersheds and help them create a benchmark for future studies. The indicators, rated as either "Good", "Fair" or "Poor", have been used on watersheds throughout the province. The complete overview and ranking of each indicator in the Sturgeon River Watershed is shown in Table 1 on page 20.

Indicator Scale:



HOW HEALTHY IS OUR WATERSHED?

LAND USE

Agriculture is the primary land use in the Sturgeon River Watershed, with the highest percentage occurring in its central and eastern portions. While agricultural land seems to be declining, the land is not being turned back to natural cover like grasslands. Instead, it is being developed into more houses, commercial areas and linear developments (roads and transmission lines) to meet the needs of our increasing population. This poses a significant risk to watershed health.

But it isn't the only risk. With only one riparian study done on Sandy Lake, more information is needed on the health of the watershed's riparian areas if we are to determine how well they are working. Riparian buffers, like grasses, shrubs and trees, are critical to filter out unwanted nutrients into our water supply that can come from residential yards, livestock, and through a loss of wetlands.

One of our biggest knowledge gaps is wetland loss, and what their impact may be on the watershed. Each year, wetland loss continues due to increasing urban, rural and agricultural pressures. With each loss, we are also losing our ability to filter water, store and release water during floods and droughts, and provide homes for wildlife. An inventory carried out by Ducks Unlimited Canada found 6.8 per cent of the watershed has permanent and temporary wetlands; however, little information is available on drained wetlands. Several projects are underway in order to increase our knowledge around wetland densities and conservation efforts.

Facts:

- 71% of the watershed is under agriculture development
- There are almost 780,000 livestock (cattle, poultry, pigs, sheep, goats) in the watershed.
- There are a total of 5,263 km of linear developments which covers an area of 79.2 km^2 or 2.3% of the total land base.
- Big Lake is recognized as an Environmentally Significant Area and Important Bird Areas site.

SUCCESS STORY

The Big Lake Task Force and Technical Advisory Committee are members of the seven municipalities in the Big Lake Basin (city of Edmonton, city of St. Albert, Spruce Grove, Stony Plain, Parkland County, Sturgeon County and Lac Ste. Anne County). The group joined forces to investigate drainage problems in the Big Lake Basin and to develop a stormwater management plan that reduces the impacts that urban and agricultural developments have on our natural drainage systems. The Task Force and Technical Advisory Committee created a series of recommendations on flooding issues, stormwater management and floodplain management. See more success stories on page 22 of this report.

LAND USE INVENTORY | GRADE: FAIR
Condition and Pressure Indicators
Land use inventory shows the various ways the land is being used throughout the watershed through natural areas (forests, protected areas) as well as by human disturbances (residential, agricultural etc.).

For more detailed information, visit section five of the technical report, Land use and Social/Cultural Resources, and section eight, Issues and Challenges.

LINEAR DEVELOPMENTS | GRADE: FAIR
Pressure Indicator
Linear developments include roads, rail lines and right-of-ways associated with transmission lines and pipelines. These human developments remove natural areas and can affect natural drainage patterns.

For more detailed information, visit section five of the technical report, Land use and Social/Cultural Resources, and section eight, Issues and Challenges.

LIVESTOCK DENSITY | GRADE: FAIR
Pressure Indicator
Alberta is known globally for its livestock; however, we need to ensure it doesn't impact our watershed's health. Areas with a higher percentage of livestock operations also tend to have higher concentrations of nutrients and bacteria from manure which can pose a risk to our water quality.

For more detailed information, visit section five of the technical report, Land use and Social/Cultural Resources, and section eight, Issues and Challenges.

RIPARIAN HEALTH |
GRADE: INSUFFICIENT DATA
Condition Indicator
A 'riparian area' is a buffer of vegetation (plants, shrubs) between a body of water and the land beside it. These areas help reduce floods, help prevent soil erosion and sedimentation, and help filter pollutants.

For more detailed information, visit section five of the technical report, Land use and Social/Cultural Resources, and section eight, Issues and Challenges.

WETLAND INVENTORY |
GRADE: FAIR (WITH UNCERTAINTY)
Condition Indicator
A wetland inventory helps determine the current number of wetlands on a landscape, as well as the number of wetlands lost due to human activity. Wetlands filter pollutants and also act as recharge areas for groundwater. The Sturgeon River is dependent on groundwater for water flows in dry times of the year.

For more detailed information, visit section five of the technical report, Land use and Social/Cultural Resources.

WATER ALLOCATIONS BY SECTOR | GRADE: GOOD

Pressure Indicator

This indicator shows the relative level of water use and withdrawals from our water bodies by various sectors. Permits and licenses are allocated through Water Act registrations by Alberta Environment & Water.

For more detailed information, visit section seven of the technical report, Surface Water Quantity and Management, and section eight, Issues and Challenges.

GROUNDWATER DIVERSIONS | GRADE: FAIR

Pressure Indicator

This indicator is similar to water allocations by sector but focuses entirely on groundwater diversion from our natural systems. Alberta Environment & Water regulates licences through the Water Act.

For more detailed information, visit section seven of the technical report, Surface Water Quantity and Management, and section eight, Issues and Challenges.

Photo Courtesy of Dave Conlin

WATER QUANTITY

One of the goals of the Water for Life Strategy is to ensure Albertans have access to reliable, quality water supplies. But how do we know how much water we will need in the future? And how much water are we losing or gaining per year in the Sturgeon River Watershed?

As the Sturgeon River is a prairie river, the amounts of water in the lakes and rivers within the watershed vary with the amount of rain and snow we get throughout the year. We usually experience peak flows in the spring and lower flows during the summer and fall.

There are increasing pressures on our water supply in the Sturgeon River Watershed mainly due to two things: population and agriculture. As our population continues to increase, and with it the need for food on our table, our thirst for water becomes greater for our homes, businesses, crops, livestock, yards and of course, ourselves. The water we use doesn't come from the tap. It comes from our rivers and lakes in our watershed through licences and diversions that are granted to people, businesses, industries and municipalities so we can continue to thrive. But what happens if we take too much water from the watershed? Will we prevent it from thriving?

Understanding how much of the water is being used by all of us is an important part of the examination of the Sturgeon River Watershed. If we are to have sustainable water sources, we must put a greater emphasis on conservation planning and water management plans. While water conservation objectives have not been developed within the watershed, the North Saskatchewan Watershed Alliance is planning to develop an Integrated Watershed Management Plan by 2019 for the North Saskatchewan River and its tributaries, which includes the Sturgeon River.

Facts:

- The average yearly precipitation in the watershed ranges from 450 to 500 mm.
- The average yearly evapotranspiration, which means the amount of evaporation from land and plants to the air, ranges from 365 to 425 mm. This can exceed summer precipitation by as much as 125 mm, creating a water deficit.
- Each year, a maximum of 33.5 million m^3 of surface and groundwater is allocated within the watershed.

SURFACE WATER QUALITY INDEX | GRADE: INSUFFICIENT DATA .....
Condition Indicator
Surface Water Quality Index provides a general assessment of water quality measurements based on physical (temperature, colour etc.), chemical (nutrients, minerals, metals etc.), and biological (bacteria, plants etc.) characteristics.

For more detailed information, visit section six of the technical report, Surface Water Quality, and section eight, Issues and Challenges.

NITROGEN AND PHOSPHOROUS | GRADE: POOR ○
Condition Indicator
Nitrogen and phosphorous are essential nutrients for most aquatic plants; however, too much of both can be harmful.

For more detailed information, visit section six of the technical report, Surface Water Quality, and section eight, Issues and Challenges.

PESTICIDES | GRADE: GOOD ●
Condition Indicator
Pesticides are chemicals used to control insects and invasive plants; however, if they seep into the watershed they will cause harm.

For more detailed information, visit section six of the technical report, Surface Water Quality, and section eight, Issues and Challenges.

E.COLI | GRADE: GOOD ●
Condition Indicator
E.coli provides an indication of bacterial contamination that may pose a potential risk to human, animal and watershed health.

For more detailed information, visit section six of the technical report, Surface Water Quality, and section eight, Issues and Challenges.

WATER QUALITY

One of the significant gaps in our understanding of the Sturgeon River Watershed is the lack of consistent and long-term information around water quality. While water quality has been monitored throughout the watershed, the type of samples taken and the number of tests varies at the sites. This poses a challenge in determining current water quality, potential trends, and how it may be impacting the rest of the watershed.

Similar to other watersheds in the province, the primary pollutants of concern are nutrients (nitrogen and phosphorus), bacteria (both E. coli and total coliforms), and pesticides. From this list only nitrogen and phosphorus, at the majority of sampling locations, exceed the scientific guidelines set. While increased nutrients are typical in a prairie river, the Sturgeon River may also be experiencing higher-than-normal concentrations due to the high urban development and agriculture found throughout the watershed.

SUCCESS STORY

In 2006, the City of St. Albert initiated a water quality monitoring program to assess long-term water quality conditions of the Sturgeon River within the city. Monitoring includes 10 stormwater outfalls that drain residential, commercial and industrial areas. Samples are tested for bacteria, pesticides, nutrients, solids, metals and salt concentrations. This is an important program for St. Albert to initiate, as many of the challenges like over application of fertilizers and road salt are due to the high population and the number of roads. By understanding the data, an action plan can then be developed. See more success stories on page 22 of this report.

VEGETATION TYPES | GRADE: POOR ◯
Condition Indicator
Information on the various vegetation types found throughout the watershed.

For more detailed information, visit section eight of the technical report, Issues and Challenges.

AQUATIC MACROPHYTES | GRADE: INSUFFICIENT DATA .....
Condition Indicator
Aquatic plants that are large enough to be apparent to the naked eye; may contain high concentrations of nutrients.

For more detailed information, visit section eight of the technical report, Issues and Challenges.

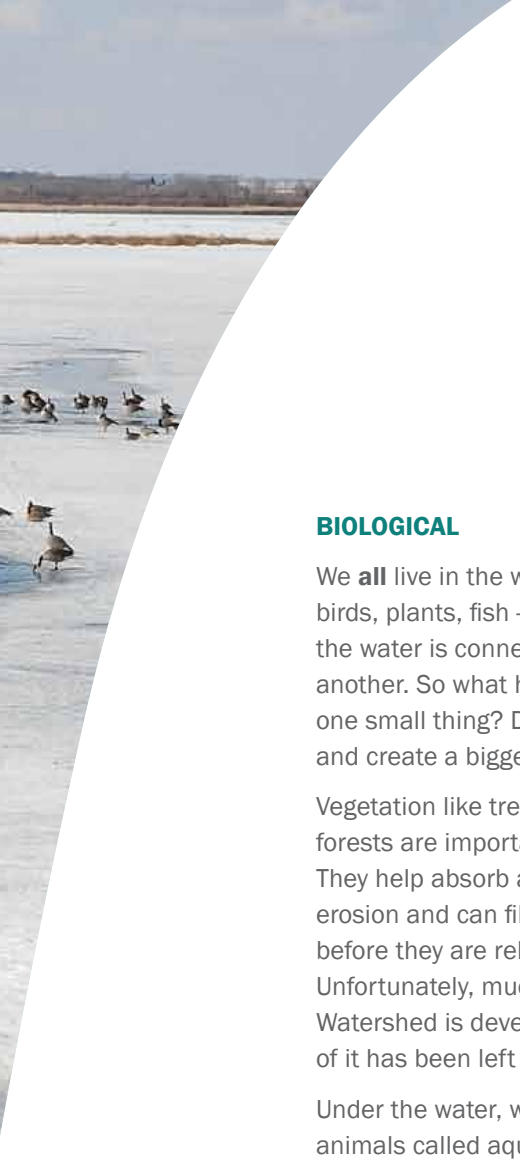
FISH | GRADE: POOR ◯
Condition Indicator
Reflects the quality and amount of fish habitat throughout the watershed. Measures include total number of fish species, and numbers of specific native, intolerant and sensitive fish species.

For more detailed information, visit section six of the technical report, Surface Water Quality, and section eight, Issues and Challenges.

BENTHIC INVERTEBRATES | GRADE: INSUFFICIENT DATA .....
Condition Indicator
Benthic invertebrates are organisms that live in or on the bottom sediments of rivers, streams and lakes. They are strongly affected by their environment including sediment composition and quality and water quality. They serve as a biological indicator that reflects the overall condition of the aquatic environment.

For more detailed information, visit section eight of the technical report, Issues and Challenges.

Photo Courtesy of Dave Conlin



BIOLOGICAL

We **all** live in the watershed. People, animals, birds, plants, fish — everything on the land and in the water is connected, and dependent on one another. So what happens when we impact just one small thing? Does it cause a chain reaction and create a bigger impact than ever intended?

Vegetation like trees, shrubs, grasses and forests are important to have in a watershed. They help absorb and hold water, prevent soil erosion and can filter many harmful nutrients before they are released into the water. Unfortunately, much of the Sturgeon River Watershed is developed, and only 20 per cent of it has been left in its natural state.

Under the water, we need to study the plants and animals called aquatic macrophytes and benthic invertebrates. Right now, we don't have enough data to understand where these plants and animals are living, if they are thriving or being impacted, and what trends are taking place. Both of these plants and animals are good indicators of aquatic health and it is critical that we get the information we need in order to better understand the decisions we need to make.

Fish are also used as an indicator of watershed health. Numerous species of fish live in our watershed; however, detailed population estimates are not available. As the Sturgeon River is a prairie river, with naturally high nutrient concentrations and sometimes shallow waters, events where large numbers of fish die due to low oxygen levels are unfortunately common.

Facts:

- Detailed data is needed for aquatic macrophytes and benthic invertebrates as they are prime indicators of aquatic health
- More information is needed on fish populations throughout the watershed
- Angling pressure and overharvesting resulted in the collapse of Walleye and other fisheries in Lac Ste. Anne

TABLE 1 | **SUMMARY OF ASSESSED HEALTH RATINGS FOR SELECTED INDICATORS**

Indicator Category	Indicator	Assessed Health Rating
Land Use Indicators	Land Use Inventory	Fair
	Linear Developments	Fair
	Livestock Density	Fair
	Riparian Health	(Insufficient Data)
	Wetland Inventory	Fair (with uncertainty)
Water Quantity Indicators	Water Allocations by Sector	Good
	Groundwater Diversions	Fair
Water Quality Indicators	Surface Water Quality Index	(Insufficient Data)
	Nitrogen and Phosphorus	Poor
	Pesticides	Good
	E. coli	Good
Biological Indicators	Vegetation Types	Poor
	Aquatic Macrophytes	(Insufficient Data)
	Fish	Poor (with uncertainty)
	Benthic Invertebrates	(Insufficient Data)
Overall Grade		Fair

For more detailed information, please visit section eight of the technical report, Issues and Challenges.

OVERALL GRADE | FAIR

For the first time, we have a clearer picture of the overall health of the Sturgeon River Watershed. This assessment is based on the average of values given to the 15 indicators that are discussed throughout this summary.

While some of the watershed remains in good condition, other areas are ranked as fair or even poor. One of our biggest challenges is to ensure that we get the data needed to fill our knowledge gaps on important criteria such as wetlands, riparian buffers, surface water quality, and the plants and animals that live in the water (aquatic macrophytes and benthic invertebrates).

It will be important to understand what changes we need to make as a society to help lessen the impacts on our watershed. It is critical that we:

- minimize the impacts of urban sprawl and residential expansion
- minimize the loss of further natural areas like wetlands and riparian areas which can impact water quality
- reduce the amounts of pollutants entering the watershed such as fertilizers, pesticides and road salts through monitoring and education

This report is the beginning. Now that we better understand the health of our watershed, it's time to take action. It's not up to one individual, one business, one group, one municipality. This is a shared responsibility in which everyone must play a part. While there are new recommendations coming out of this report, many people are already making a difference in the health of our watershed.

GRADE: FAIR

TAKING ACTION TOGETHER – MAKING A DIFFERENCE TODAY

We all play a role in the health of our watershed. Many success stories are already occurring throughout our region. People are showing that simple actions can make a world of difference. Here's just a snapshot of some of the successes across our region.

BIG LAKE ENVIRONMENT SUPPORT SOCIETY (BLESS)

BLESS is a registered not-for-profit organization dedicated to conserving Big Lake through advocacy, public education, stewardship of the Big Lake Natural Area and data collection programs.

One of their biggest achievements to date is when Big Lake received status as an International Important Bird Area (IBA) through a BLESS nomination. Big Lake then received global status as an IBA and Alberta designated the lake as a Conservation Natural Area appointing BLESS the official stewards. With the designation of Lois Hole Centennial Provincial Park, the area has even more significance and protection and BLESS continues as its official stewards.

For more information on BLESS and their events visit www.bless.ab.ca

NAIT'S STURGEON RIVER APPLIED RESEARCH PROJECT

The Sturgeon River research project is a multi-year venture designed to identify issues impacting the Sturgeon River, and to engage stakeholders in developing best management practices for land use and habitat rehabilitation within the Sturgeon River Watershed.

Since 2010, numerous studies have been conducted by students including: setting up 21 permanent sampling sites for long-term monitoring of water quality and biodiversity along the Sturgeon River and its tributaries; assessment of winter water quality within the Sturgeon River throughout St. Albert; studying the potential adverse effects of winter bridge deck ploughing and traffic spray on the Sturgeon River; and understanding the recreational use of trails in Red Willow Park in St. Albert.

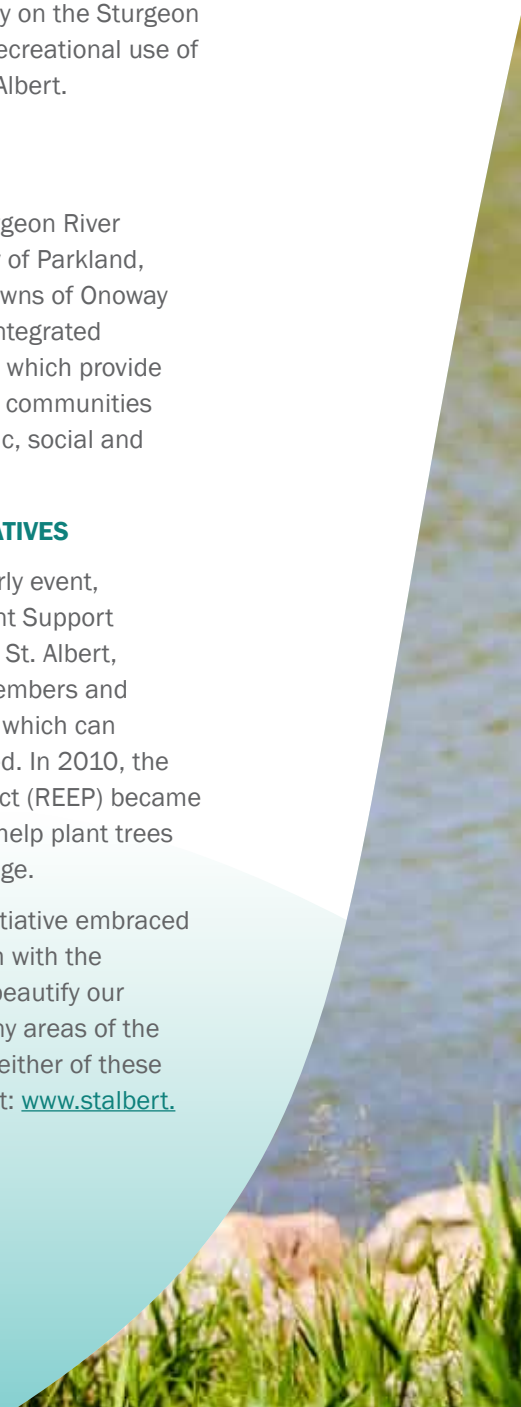
INTEGRATED COMMUNITY SUSTAINABILITY PLANS

Many municipalities in the Sturgeon River Watershed, such as the County of Parkland, City of Spruce Grove and the towns of Onoway and Gibbons have completed integrated community sustainability plans which provide a long-term vision for how their communities will develop balancing economic, social and environmental values.

SPRUCE UP ST. ALBERT INITIATIVES

Clean Up the Sturgeon is a yearly event, run by the Big Lake Environment Support Society (BLESS) and the City of St. Albert, and encourages community members and businesses to remove garbage which can negatively impact the watershed. In 2010, the River Edge Enhancement Project (REEP) became involved and asked citizens to help plant trees and shrubs along the river's edge.

Partners in Parks is another initiative embraced by residents and provides them with the opportunity to help clean and beautify our city park spaces, including many areas of the river valley. For information on either of these initiatives or others, please visit: www.stalbert.ca/spruce-up-st-albert



STEWARDS OF THE LAND

For many agricultural producers throughout the Sturgeon River Watershed, best management practices are just part of the way they do business. Many producers work tirelessly to improve their land management practices to reduce their footprint as much as possible. A simple action like restricting access to water by animals is an important practice which helps to protect our water bodies and riparian areas.

Sturgeon County has partnered with Westlock County, Athabasca County and the County of Barrhead to create Highway Two Conservation, which is a partnership partly funded by a grant from Alberta Agriculture and Rural Development. Highway Two Conservation works on projects that promote the adoption of sustainable agricultural practices. Farming is an imperative industry that is connected to the land. The soil, water and ecological resources of the land are needed by agriculture for the industry to succeed and thrive. Highway Two Conservation seeks to increase the balance between agriculture and these resources to ensure a long and prosperous future for the adults of today and the children of tomorrow.

PROTECTION OF THE STURGEON RIVER VALLEY

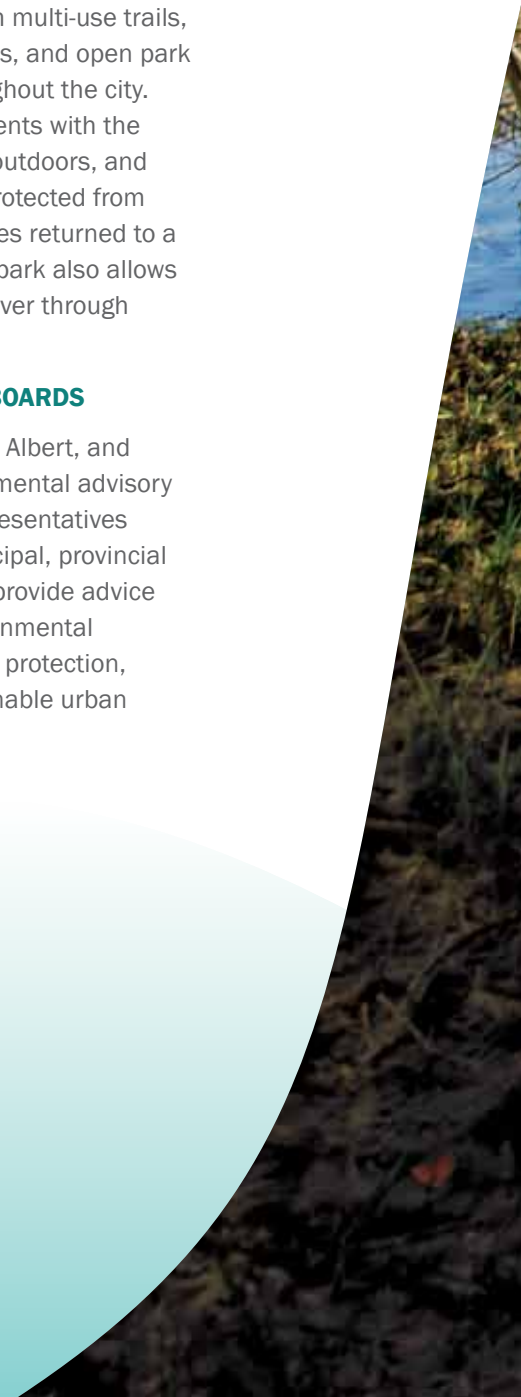
Many municipalities have adopted policies or bylaws to protect the natural areas around the Sturgeon River and its tributaries. The Town of Gibbons has designated a 300 metre buffer along both sides of the Sturgeon River and is committed to acquiring all lands in the river valley for future generations. Similarly, there is a designated 50 metre buffer along Carrot Creek in the City of St. Albert. The City of Edmonton's Top of Bank Policy restricts development along rivers or ravines for a distance equal to eight times the slope height of the feature.

RED WILLOW PARK TRAIL SYSTEM

In the 1980s, political leaders, City of St. Albert staff, community members and residents created a plan for a city-wide urban park situated along the Sturgeon River. Years later, their dreams were realized with multi-use trails, natural areas, naturalized areas, and open park spaces and playgrounds throughout the city. The trail system provides residents with the opportunity to enjoy the great outdoors, and also ensures that the river is protected from development, and in some cases returned to a more natural state. The urban park also allows residents to connect with the river through access points along the trails.

ENVIRONMENTAL ADVISORY BOARDS

The Cities of Edmonton and St. Albert, and Parkland County, have environmental advisory committees which include representatives from the community and municipal, provincial and federal governments that provide advice to municipal councils on environmental initiatives such as natural area protection, water conservation and sustainable urban development.



OUR FUTURE – MOVING FORWARD

We now have the most complete picture we've ever had of the health of the Sturgeon River Watershed. Now, our most serious work begins.

Several recommendations have come out of the Sturgeon River State of the Watershed Report; however, the recommendation with the most immediate need is:

Establish a municipal Sturgeon River Watershed Group (who will participate fully with the North Saskatchewan Watershed Alliance)

From 2012 to 2019, the North Saskatchewan Watershed Alliance will be developing an Integrated Watershed Management Plan which includes the Sturgeon River Watershed. It is vitally important that stakeholders within the watershed get involved in the planning and the on-the-ground initiatives for the basin.

Other recommendations from the Sturgeon River State of the Watershed Report include:

- promote watershed education and outreach programs (Shoreline Cleanup, Yellow Fish Road, Cows and Fish, Project Webfoot) *Timeline: Ongoing*
- harmonize Inter-municipal Planning (wetland preservation, riparian area and floodplain protection, stormwater best management practices) *Timeline: Medium*
- encourage and support Sturgeon River watershed research to address data gaps (NAIT, University of Alberta) *Timeline: Ongoing*
- promote sustainable urban development (higher density developments, improved transit systems, reduced dependence on vehicles, preservation of natural areas) *Timeline: Medium*
- undertake a drained wetland inventory for future restoration projects (involve partners such as Ducks Unlimited Canada) *Timeline: Medium-Long*
- identify and prioritize environmentally sensitive areas in watershed for protection *Timeline: Medium-Long*
- implement Sub basin recommendations from North Saskatchewan Watershed Alliance Integrated Watershed Management Plan *Timeline: Medium-Long*

For a list of recommendations that are currently ongoing as well as further information on conclusions from the Sturgeon River State of the Watershed Report, please visit section nine of the technical report, Conclusions, Recommendations, and Stewardship Opportunities.

Changes to the watershed are not going to happen overnight. It will take thoughtful planning, consultation with stakeholders, and the willingness of people to roll up their sleeves to protect our watershed.

Municipalities have the responsibility for the majority of land-use planning and decisions affecting aquatic ecosystems and other environmentally sensitive areas.

Industries and businesses have the responsibility to find ways to lessen their footprint and protect the environment.

And residents need to be more aware of the impacts of their decisions and actions.

Everything in a watershed is connected.

This is a shared responsibility and small simple actions by everyone involved will be the difference in getting the job done.

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THANK YOU TO:

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Photo Courtesy of Dave Conlin

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