# Sturgeon River Watershed Alliance

## Municipal Watershed Partnerships: Overview of the SRWA

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**NSWA Municipal Forum**

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Parkland County

Sturgeon River Watershed Alliance

NSWA
NORTH SASKATCHEWAN WATERSHED ALLIANCE

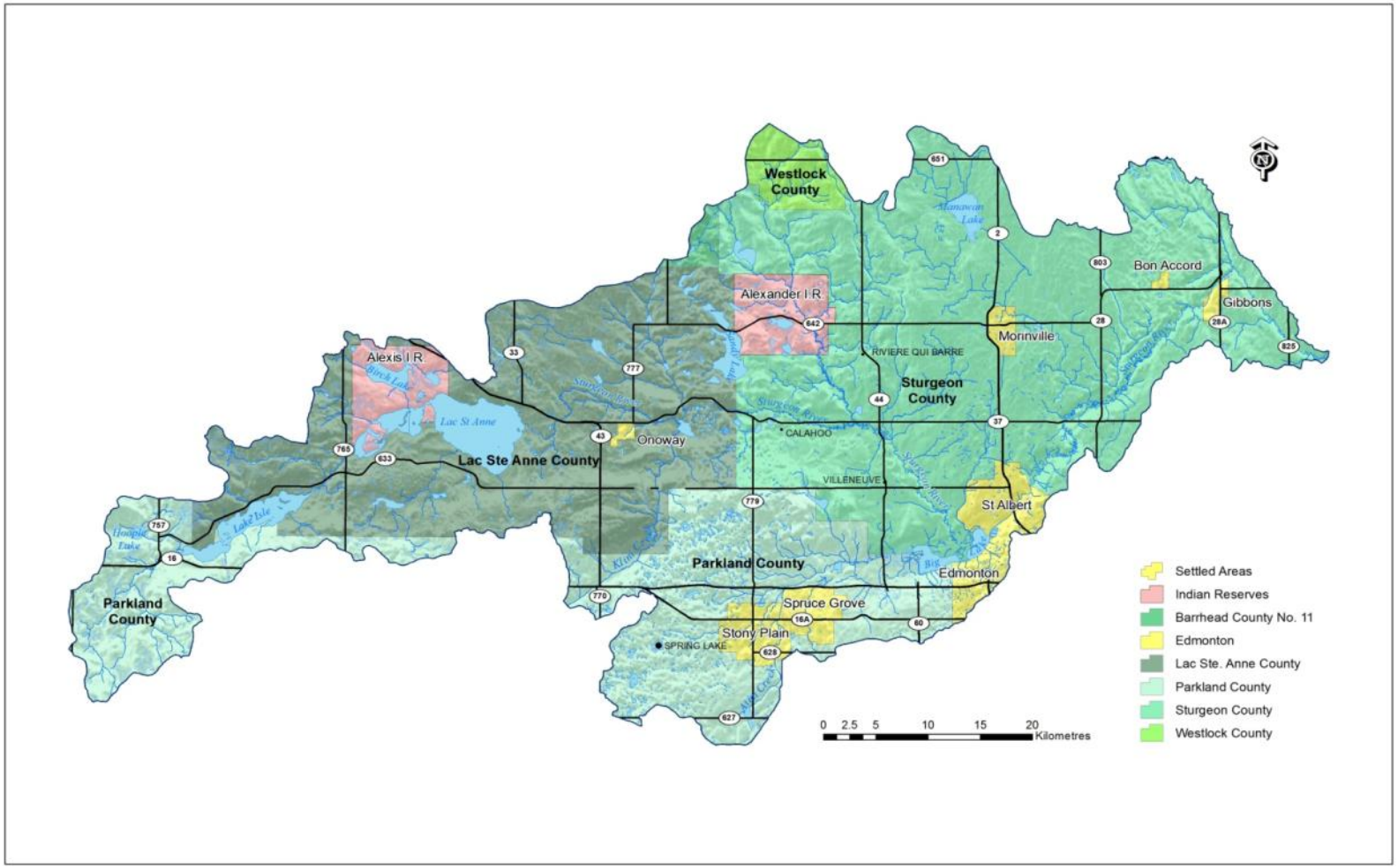
# Outline

- State of the Watershed
- Issues and Challenges
- SRWA Project Work
- The Importance of Municipal Collaboration
- 2018: Next Steps

# State of the Watershed

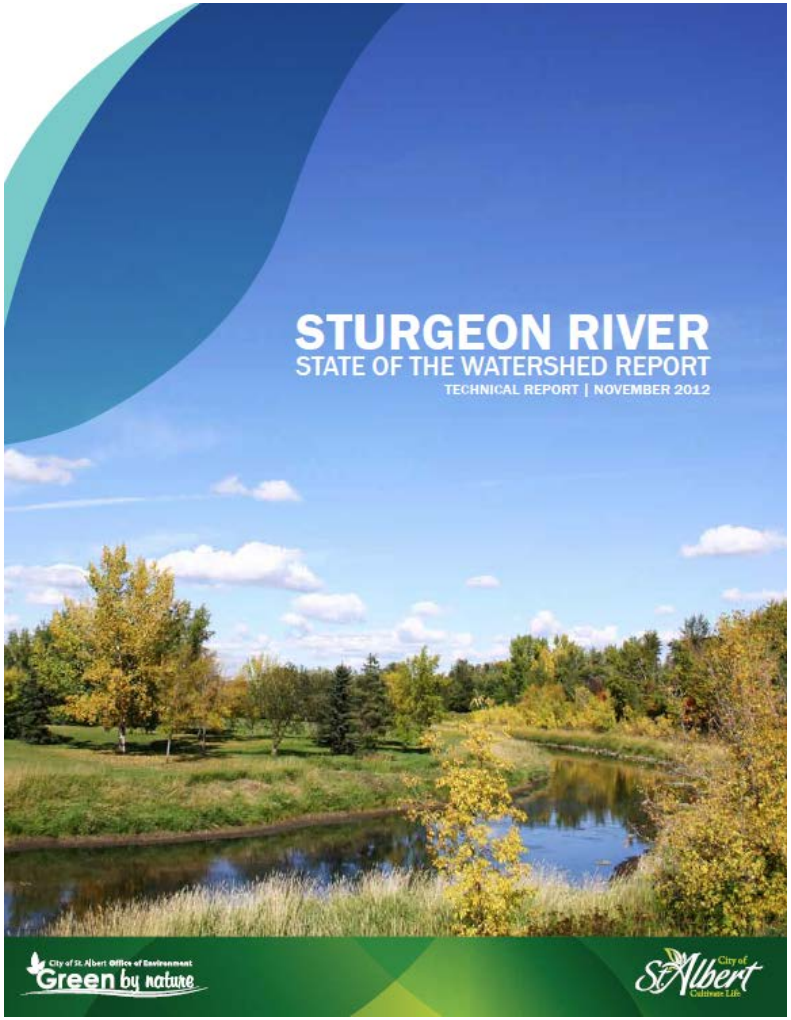
# North Saskatchewan Watershed

# Sturgeon River Watershed



# State of the Watershed Report

- Project initiated by the City of St. Albert in 2012



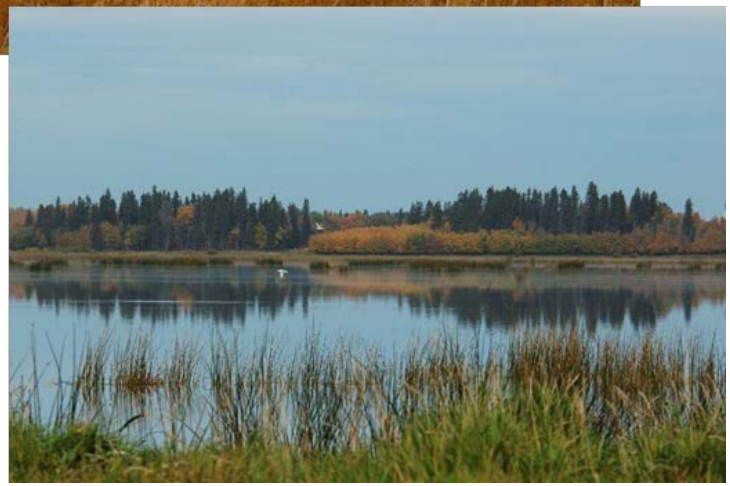
# Questions to be Answered

- What is the current condition of the watershed?
- How does this compare to past conditions?
- What are the critical or emerging issues?
- What the data/knowledge gaps that need to be addressed?
- What mechanisms are in place or need to be in place to maintain and protect the health of the Sturgeon River Watershed?

# Sturgeon River

- Sturgeon River is a small, precipitation and groundwater fed prairie river
  - 260 km in length
  - 3,301 km2 watershed area
  - Very productive
  - High variability in water level and flow

# Sturgeon River Watershed Land Cover



- 71% agriculture
- 20% natural features
- 5% water
- 4% developed

# Sturgeon River Watershed Land Use

- 74.5% population in urban areas with high growth rates
- Gravel extraction
- Linear developments
- Livestock

# Sturgeon River Aquatic Environment

- Annual water deficit – evaporation > precipitation by ~125 mm
- Nutrient rich
- Lack of long-term, consistent water quality and quantity data
- Low invertebrate diversity

# Sturgeon River Fishery

- Now: Northern pike, white suckers and minnows
- Whitefish and sturgeon no longer exist on mainstem
- River used for spawning, rearing and feeding near lake inflows/outflows
- Lakes host a larger, more diverse population of fish and may provide winter refuge

# Issues and Challenges

# Ecological Health Indicators

- 15 indicators with categories for:
  - Land Use
  - Water Quantity
  - Water Quality
  - Biological health
- Graded POOR, FAIR or GOOD
- Insufficient Data

# Main Watershed Issues

- Lake and river eutrophication
- Blue green algae in lakes
- Low river levels and flow
- Low dissolved oxygen
- Invasive species – Lake Isle and Sturgeon River

# Watershed Challenges

- Rapid urban development
- Loss of natural areas
- Gravel extraction
- Stormwater impacts

# SOW Overall Grade and Key Issues

- Minimize impacts of urban sprawl
- Prevent further loss of natural areas especially wetlands and riparian areas
- Reduce amounts of pollutants entering the watershed - fertilizers, pesticides and road salts

# Sturgeon River SOW Data Gaps

- Riparian Health
- Aquatic Macrophytes
- Benthic Invertebrates
- Wetland Inventory
- Fish Populations

# Sturgeon River Watershed Alliance

# Sturgeon River Watershed Alliance

- SOW recommendation: Watershed group formation
  - Municipally led
- Variation of issues between watersheds and size of NSR makes sub-basin management more effective

# Sturgeon River Watershed Alliance

- SRWA formed in 2013
- Composed of Steering Committee and Technical Advisory Committee
- Technical and administrative support from NSWA
- 10 member municipalities

# Sturgeon River Watershed Alliance

- Parkland County
- City of St. Albert
- Sturgeon County
- City of Edmonton
- Lac St. Anne County
- City of Spruce Grove
- Town of Onoway
- SLVACE
- Town of Morinville
- Town of Gibbons

# Sturgeon River Watershed Alliance

- Initial work – Terms of Reference for all committees
- Visioning workshop
- Communications plan
- Long-term work plan
- Immediate need to address data gaps

# Sturgeon River Projects

$500,000 received to date for technical projects:

- **Water Quantity**
  - Literature review of reports
  - Water balance for headwater lakes
  - Modelling of flood and drought resiliency and restoration opportunities (ALCES)

# Sturgeon River Projects

- **Ecosystem Health**
  - Riparian condition assessment + upland risk
  - Survey of aquatic health
  - Barriers to fish passage
  - Fish habitat condition
  - Winter dissolved oxygen study
  - Overview of gravel extraction impacts

# Sturgeon River Projects

- **Water Quality**
  - Overview of current and historic conditions
- **Landscape & Hydrology**
  - How land cover and use affect overland flow
- **Gravel Impacts**
  - On surface and ground water quality and flow
- **Intermunicipal Policy Alignment**
  - Review of existing policies and legislation; recommendations for municipal policy/bylaw alignment

# The Importance of Indigenous Inclusion and Engagement

- Alexis First Nation – October 1, 2017

# Municipal Collaboration is Key

- There is no real precedent for watershed work
- We need to speak as one voice in our watersheds
- Create cohesion through leadership and collaboration

# Next Steps

# 2018: An Exciting and Challenging Year!

# What’s Next

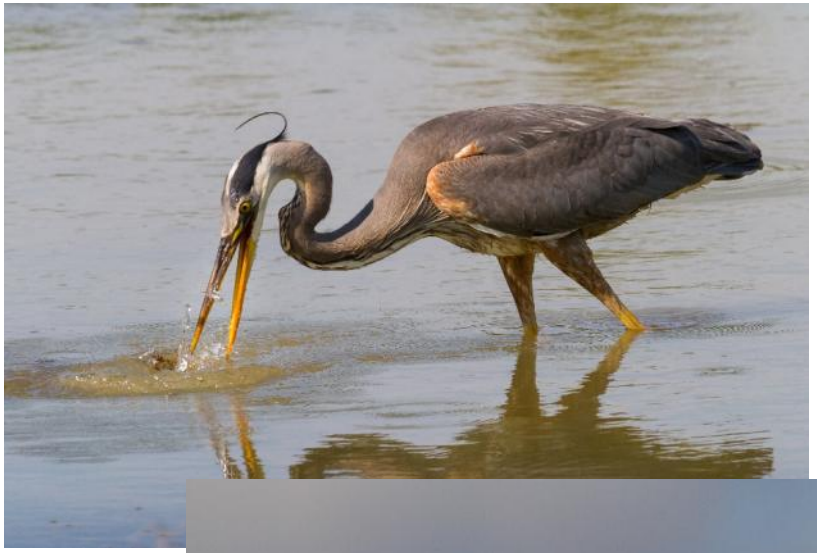
- Completion of technical studies
- Orientation of new SC members
- Communication of results to Steering Committee and other policy makers
- Work with AEP
  - River monitoring
  - Approvals

# What’s Next

- Identification and prioritization of restoration opportunities
  - Funding
- Land Use Framework alignment?
- Intermunicipal collaboration – IDP process

# What’s Next

- Determine key areas to address with policies – partnership approach
- Public consultation and education events
- Watershed management plan



# What is an IWMP?

- Outlines actions and responsibilities for:
  - Water quality protection
  - Water supply management
  - Aquatic ecosystem protection
  - Groundwater protection
  - Alignment of land and water
  - Planning at regional scale

# Questions for Elected Official

- How do the decisions I make affect the watershed?
- Where do I need to gain knowledge?
- How can my experience help others in the watershed make good decisions?
- How do we identify actions that are not limited to what should the NSWA do? Rather, what can I do to move it forward?

# Questions continued…

- If you don’t see yourself working on any actions, the plan is not supporting your full participation
- Where do conversations need to happen? – the importance of advocacy

*“If everyone is moving forward together, then success takes care of itself.”*

Henry Ford

# Thank you!

- **Questions?**