

MEEWASIN STATE OF THE VALLEY 2009 ASSESSMENT REPORT



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The State of the Valley

The State of the Valley Report is an assessment of outcomes resulting from the approach the Meewasin Valley Authority takes to stewardship of the natural and cultural heritage resources of that portion of the South Saskatchewan River basin north and south of Saskatoon known as the Meewasin Valley. The State of the Valley assessment has been conducted every five years since 1993.

Desired outcomes have been articulated in a number of planning documents, the foundational document being The Meewasin Valley Project – 100 Year Concept Plan (1979), written by Raymond Moriyama Architects and Planners. The mandate and form of the Meewasin Valley Authority is laid out in the Meewasin Valley Authority Act, an Act based on the goals, aspirations, issues, and opportunities identified in that Plan.

The overarching outcomes for the Meewasin Valley are health, fit, balance, and vibrancy. The 100 Year Concept Plan (1979) charged Meewasin as follows:

The adoption of the broad concept of health and fit.

The adoption of the theme of linkage with the river as a spine.

The adoption of the principle of balance.

The acceptance of the natural system as a base for planning.

The general objectives of M.V.A. to be:

- *the conservation of nature.*
- *the improvement of water quality and reduction of pollution.*
- *the enlargement of educational and research opportunities.*
- *the improvement of rural-urban links and relationships.*
- *the improvement and extension of recreational opportunities²*

Assessing the results of the efforts of the Meewasin Valley Authority after 30 years (and the last five in particular), there is evidence that:

- the **health** of the valley meets expectations;
- the **fit** (of the organization mandate) within the valley remains strong;
- the **balance** within the valley exceeds expectations; and
- the **vibrancy** of the Valley meets expectations.

The overall State of the Valley in 2009 is good.

There is lots of work yet to do, but Meewasin appears to be having a positive effect and to be on the right course.

Results Summary

Indicator	Expectation	Grade
Health: Wildlife habitat	No net loss of habitat.	Needs improvement
Health: Protected land	Increase acres under public protection.	Exceeds expectations
Health: Ecological integrity / conservation of nature	Maintain ecological integrity.	Meets expectations
Health: Source water protection	Play a leadership role in source water protection.	Meets expectations
Fit: Public support	The general public believes Meewasin balances conservation and development well.	Meets expectations
Balance: Public shoreline	Public can access the entire shoreline within City limits. Public and private shoreline within the RM of Corman Park is proportional.	Exceeds expectations
Balance: Public access points	Balance the number of public access points to the river.	Exceeds expectations
Balance: Trail	Provide a trail system with and connecting to the Valley to accommodate a variety of users.	Meets expectations
Balance: Land use mix	Balance human use and conservation through land use.	Meets expectations
Vibrancy: Green space	Ensure adequate green space.	Needs improvement
Vibrancy: Continuum of uses facilitated	Provide for both active and passive recreational use of the Meewasin Valley.	Meets expectations

Purpose

The purpose of the State of the Valley report is to assess outcomes resulting from the approach the Meewasin Valley Authority takes to stewardship of the natural and cultural heritage resources of that portion of the South Saskatchewan River basin north and south of Saskatoon known as the Meewasin Valley.

Results of the State of the Valley assessment help:

- to identify priorities for action
- as a benchmark for future assessments
- as a framework and source of tools for project level assessment, planning, and management
- to gain foresight on potential consequences of decisions affecting ecosystems
- to identify response options to achieve conservation, education, and development goals
- to help build individual and institutional capacity to understand integrated ecosystems
- to guide future research



Indicators

The indicators selected for study in 2008 are based on those used for past State of the Valley assessments since 1993. Several new indicators (shown in blue below) have been added to the assessment that respond directly to the mandate charged to Meewasin in the 100-Year Plan: **health, fit, balance, and vibrancy**.

Health	Fit	Balance	Vibrancy
<p>Amount: wildlife habitat</p> <p>Amount: protected land</p> <p>Ecological Integrity / conservation of nature:</p> <ul style="list-style-type: none"> natural & diverse vegetation hydrologic function wildlife species diversity size & connectivity of habitat lands resource management plan implementation monitoring <p>Source water protection (improvement of water quality & reduction of pollution)</p>	<p>Development & Education results (the enlargement of experiential, educational & research opportunities)</p> <p>Public support</p>	<p>Amount of publicly accessible shoreline</p> <p>Number of public access points to the river (nodes)</p> <p>Amount and type of Meewasin Trail (links)</p> <p>Land use mix/change</p>	<p>Amount of green space</p> <p>Continuum of uses facilitated (the improvement and extension of recreational opportunities)</p> <p>Community capacity</p> <ul style="list-style-type: none"> understanding of the natural system conservation values articulated plans resources available for protection cultural capital rural-urban relationship facilitation



Health

Wildlife Habitat

Land use classification of the study area is assigned by using aerial photographs, satellite imagery, and specialized land use parcel information databases available from the City of Saskatoon and Rural Municipality of Corman Park.

Throughout the study area, wildlife habitat continues to be a significant land use.



Indicator	Status	Trend
Total land in habitat	1359 hectares (3358 acres) or 22% of the land-base of the Meewasin Valley is habitat.	There has been a loss in the absolute number of acres in habitat (87 hectares) over the last 10 year period.
Land in habitat parcels >50 acres in size	1245 hectares (3076 acres) of this habitat exists in 23 parcels that are of a sustainable size (>50 acres)	Connectivity between habitat parcels has been improved. Only 12 parcels were >50 acres at the time of the last assessment.

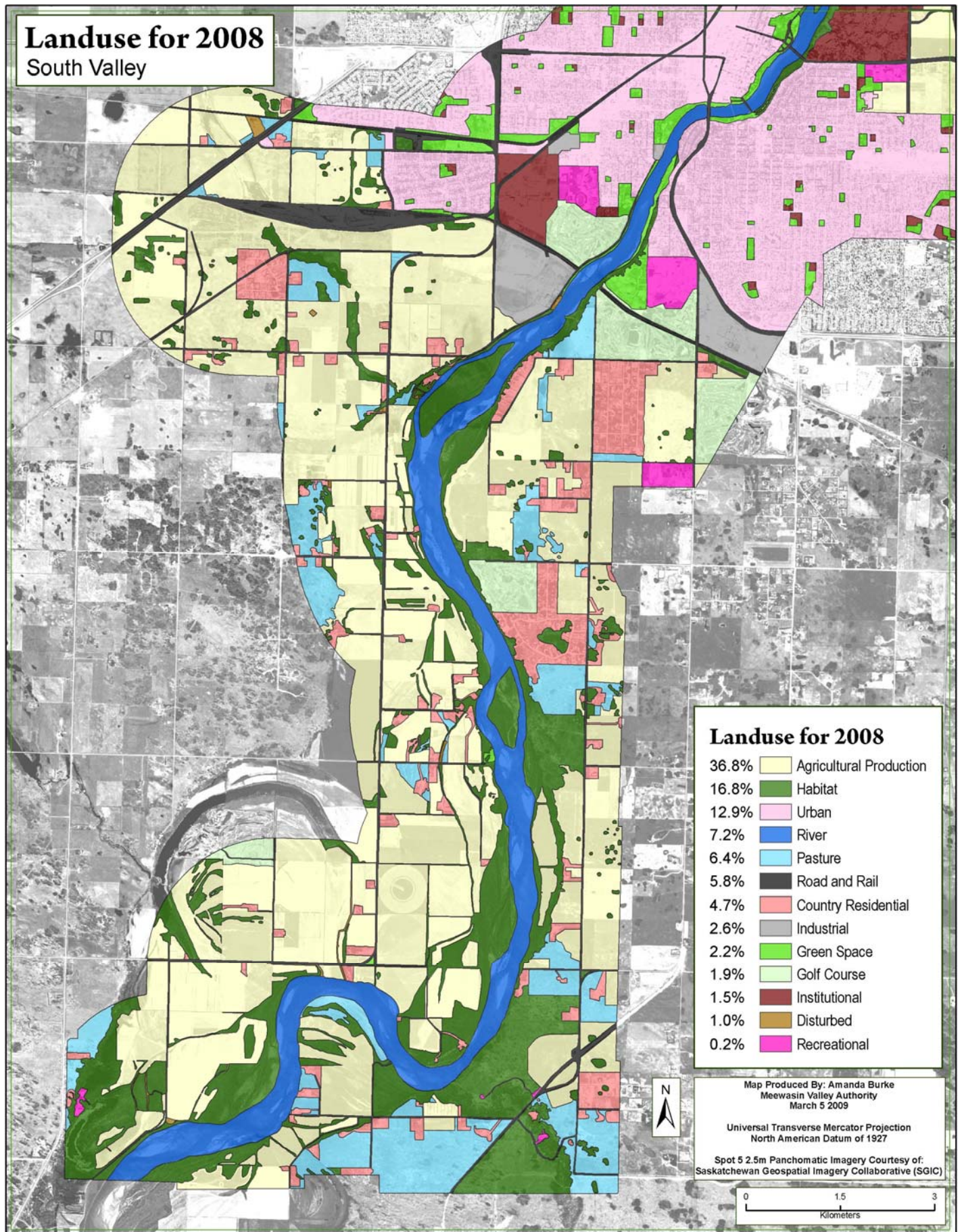
EXPECTATION: No net loss of habitat.

ASSESSMENT: While improvements to the quality and sustainability of habitat have been achieved, habitat loss continues to occur.

GRADE: *Needs improvement.*

The land use maps on the following pages illustrate the geographic distribution of various land uses, the relationships between these uses, and the relative proportion of the study area in each land use classification. (NOTE: *Land use classification* refers to parcels or polygons observed to be used in the manner noted by the categorization rather than reflecting a zoning or development plan land use designation.)



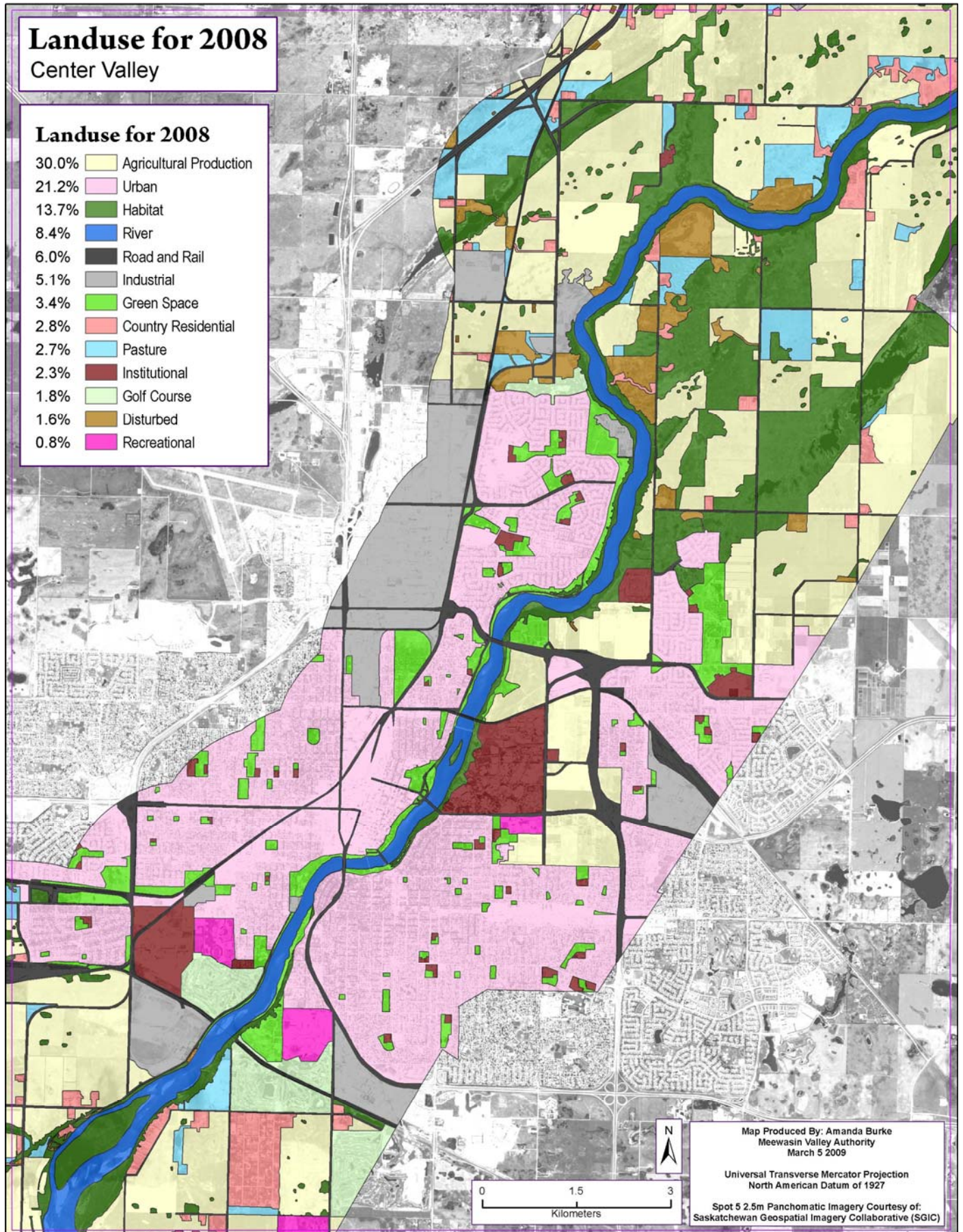


Landuse for 2008

Center Valley

Landuse for 2008

30.0%	Agricultural Production
21.2%	Urban
13.7%	Habitat
8.4%	River
6.0%	Road and Rail
5.1%	Industrial
3.4%	Green Space
2.8%	Country Residential
2.7%	Pasture
2.3%	Institutional
1.8%	Golf Course
1.6%	Disturbed
0.8%	Recreational

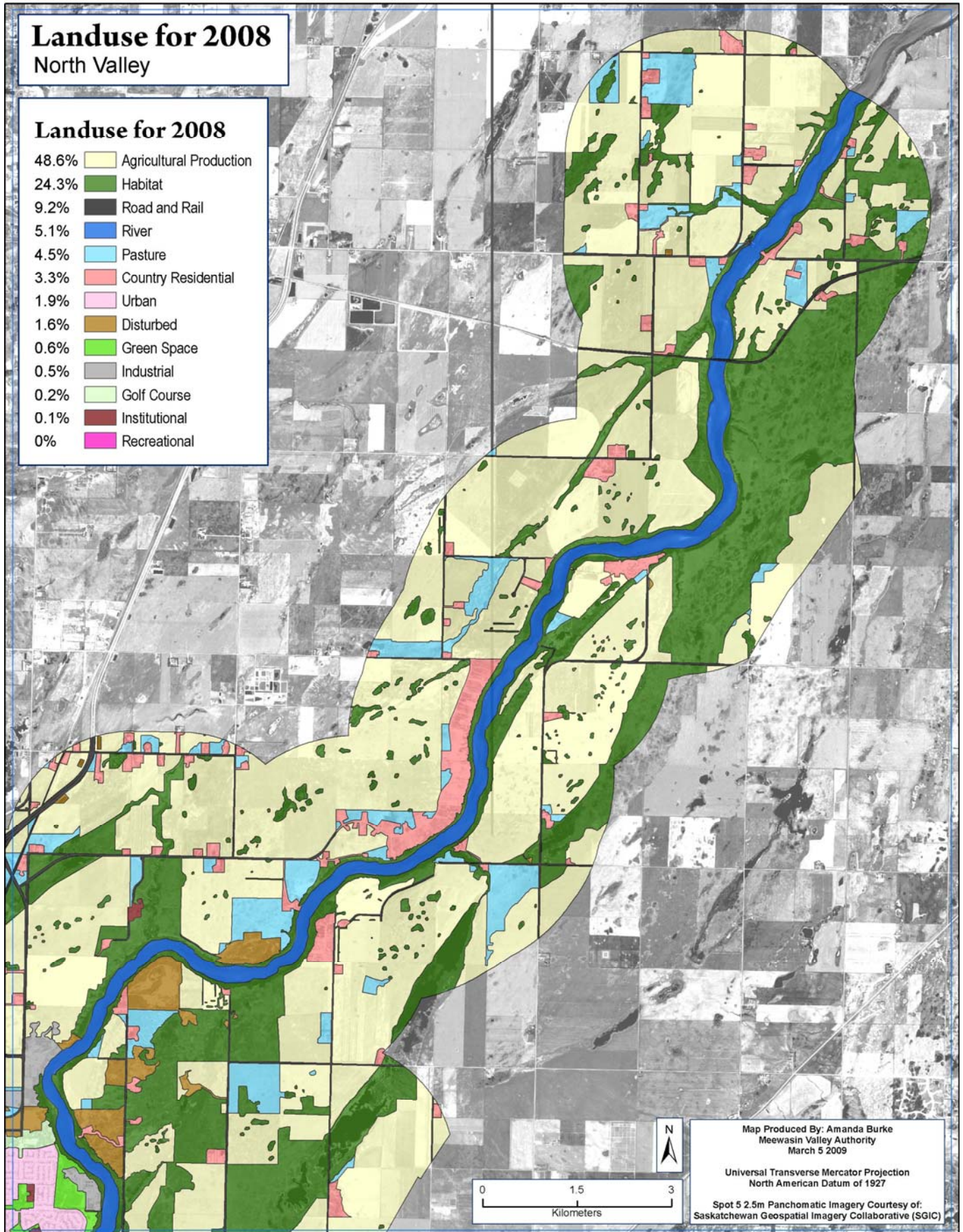


Landuse for 2008

North Valley

Landuse for 2008

48.6%	Agricultural Production
24.3%	Habitat
9.2%	Road and Rail
5.1%	River
4.5%	Pasture
3.3%	Country Residential
1.9%	Urban
1.6%	Disturbed
0.6%	Green Space
0.5%	Industrial
0.2%	Golf Course
0.1%	Institutional
0%	Recreational



Map Produced By: Amanda Burke
Meewasin Valley Authority
March 5 2009

Universal Transverse Mercator Projection
North American Datum of 1927

Spot 5 2.5m Panchromatic Imagery Courtesy of:
Saskatchewan Geospatial Imagery Collaborative (SGIC)

Health

Protected Land

The 100-Year Plan identified a mandate for the conservation of nature. The Meewasin Valley Authority Act provided an important mechanism to deliver on that mandate. Lands with conservation values may also be brought into public ownership and protected through partnerships.

Indicator:

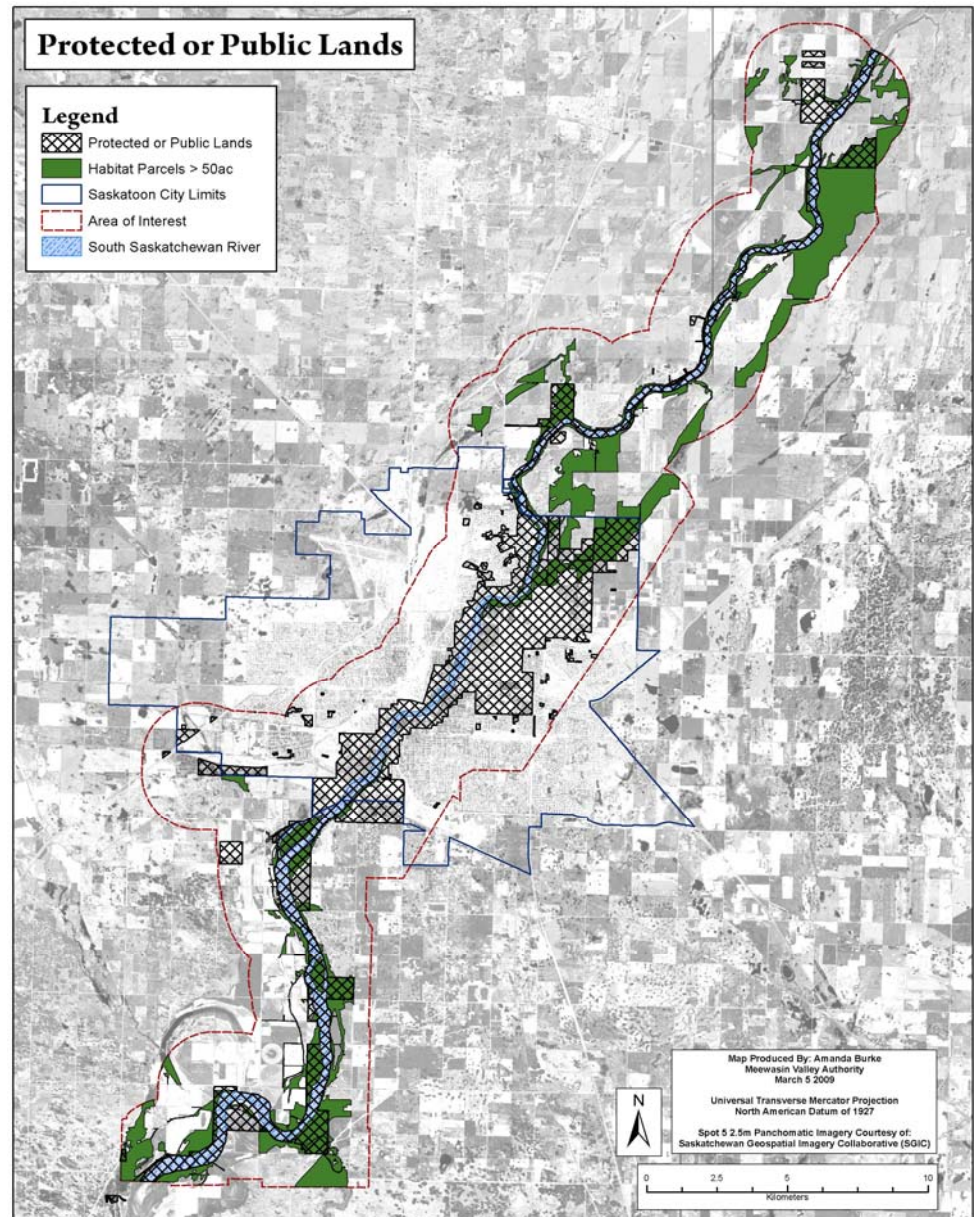
Total land under the jurisdiction of the Meewasin Valley Authority

Status:

6278 hectares (15,513 acres) are now part of the Meewasin Valley. An additional 70 acres of habitat land is under public protection outside the Meewasin jurisdiction.

Trend:

At the time of the last assessment, 6051 hectares (14,952 acres) were in the Meewasin Valley. This constitutes an addition of 227 hectares (561 acres). All this land is habitat.

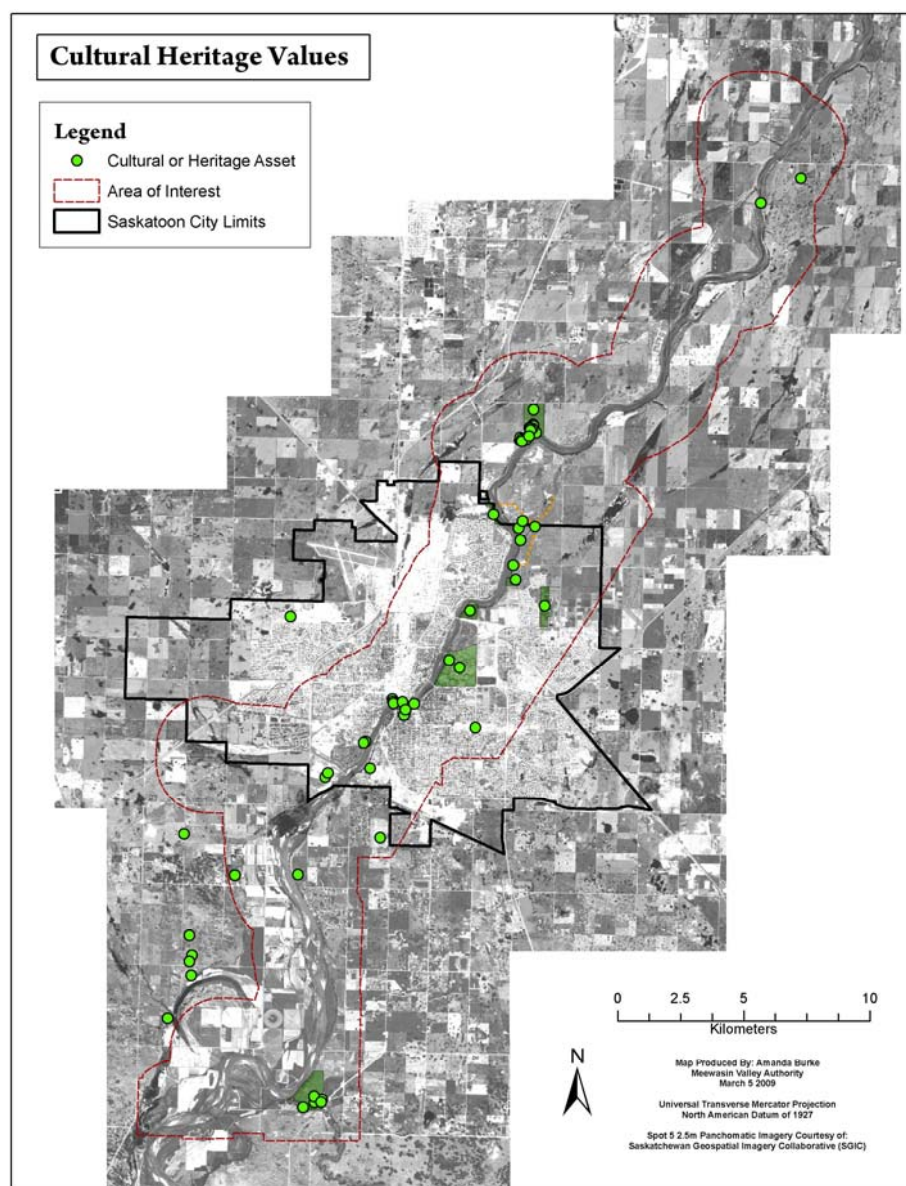


EXPECTATION: Increase acres under public protection.

ASSESSMENT: With the addition of conservation easements, crown land through channel migration, and Corman Park environmental reserve, the amount of protected land is increasing.

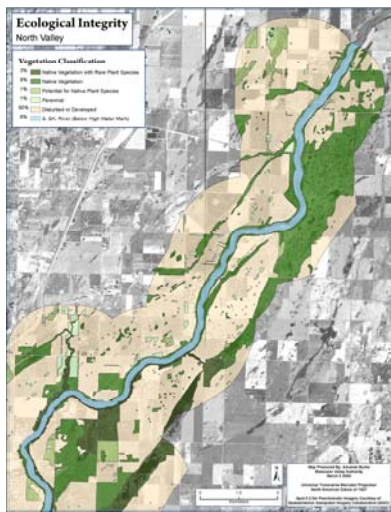
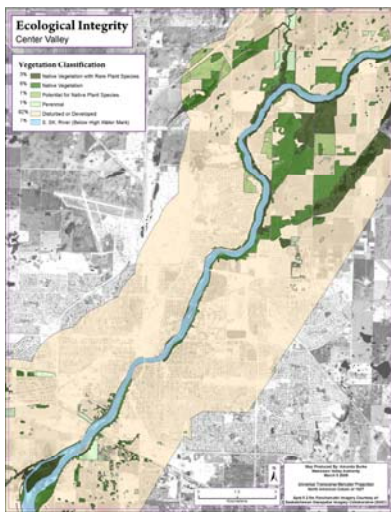
GRADE: Exceeds expectations.

It is expected Meewasin will continue to strive to expand the number of acres under public protection through the mechanisms available under the Meewasin Valley Authority Act. Recognition by other agencies that land conservation is important exceeds expectations and marks a very positive trend.



Health

Ecological Integrity/Conservation of Nature



Defining ecological integrity:

The level of disturbance and stress affecting the natural function of an ecosystem can be described as ecological integrity. An area with high integrity has little stress and is comprised of a high level of biodiversity including mostly native species in good condition in a geographic location that is expected.

Meewasin classified habitat parcels based on the following criteria:

- native vegetation with rare plant species
- native vegetation
- potential for native plant species
- perennial cover (vegetation comprised of non-native species)
- disturbed or developed
- river (below high water mark)

Indicator: Natural & diverse vegetation

Status:

Vegetation inventories classified for the first time.

Significant areas with high natural ecological integrity were identified and mapped.

Indicator: Size & connectivity of habitat

Status:

1245 hectares (3076 acres) of habitat has sufficient connectivity (92% of all habitat parcels) to be of a sustainable size (>50 acres).

Health

Ecological Integrity/Conservation of Nature

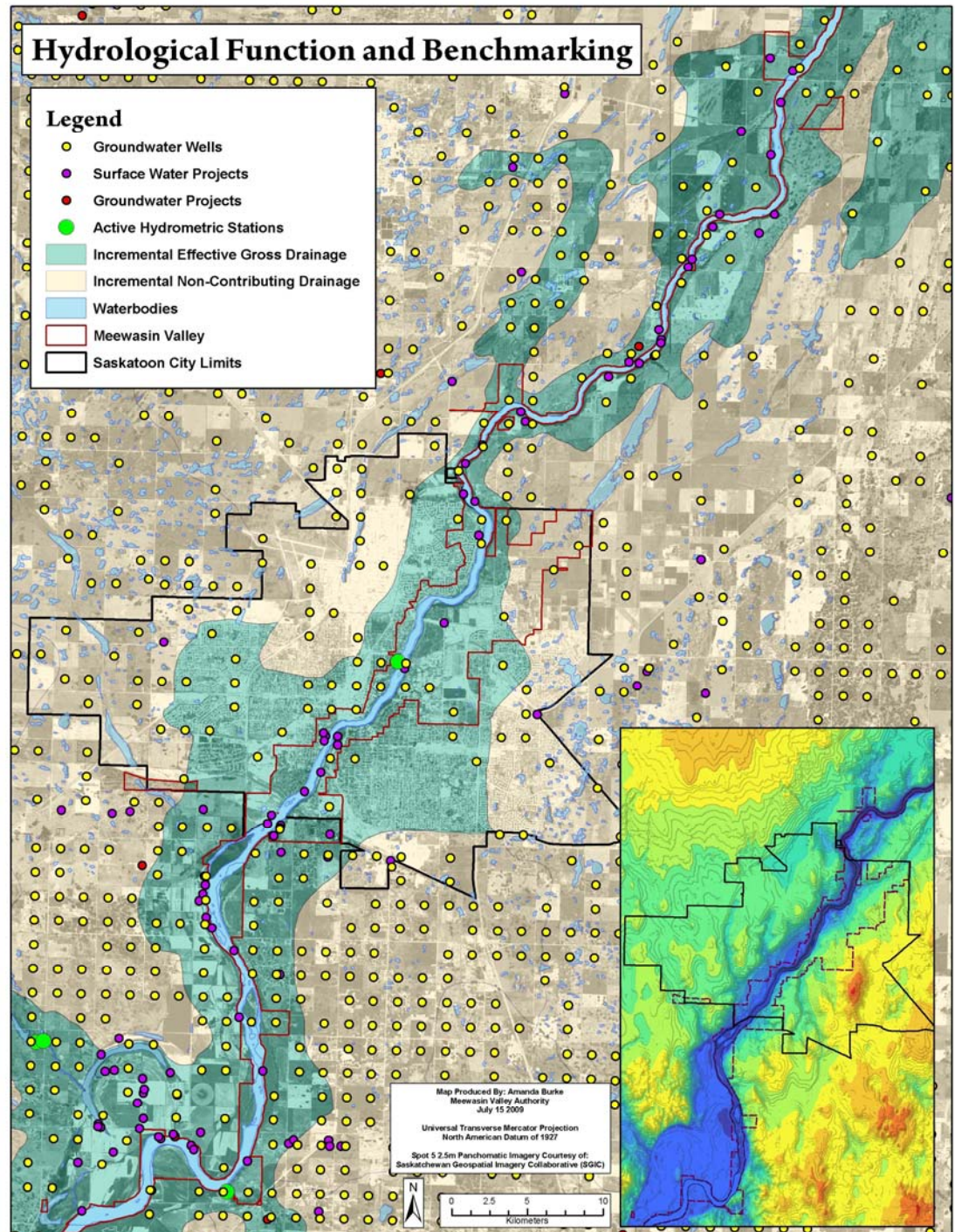
Indicator: Hydrologic function

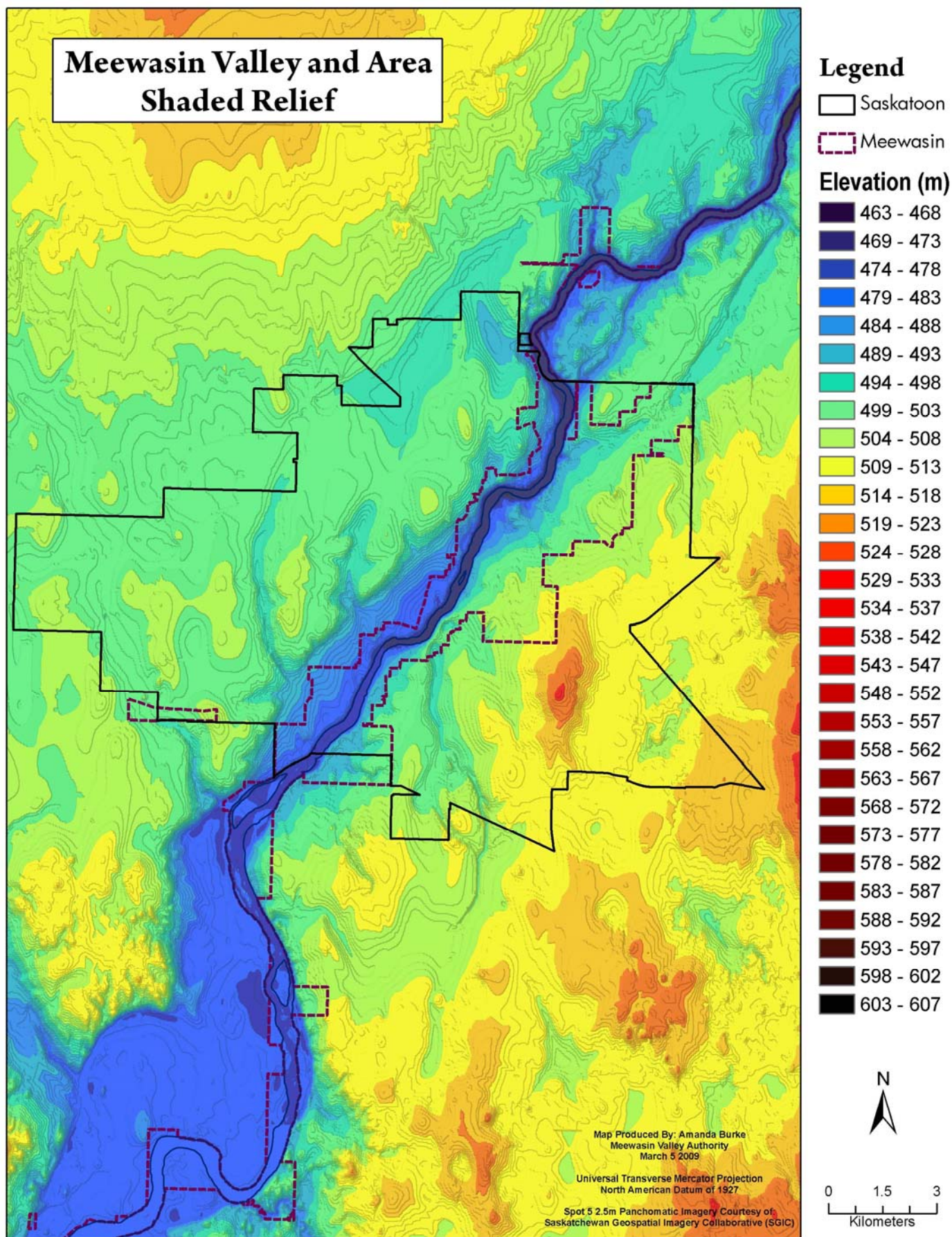
Status:

A watershed has a latent ability to store and clean water. A variety of factors may alter the hydrology of the landscape:

- drainage
- water withdrawal
- runoff
- discharges from development
- diversion
- vegetation change
- slope instability
- etc.

Information benchmarks are being collected for the first time to prepare for future assessment of hydrologic function.





Health

Ecological Integrity/Conservation of Nature

Indicator: Wildlife species diversity

Status:

The Meewasin Valley is home to many types of wildlife.

Wildlife diversity has been inventoried at several locations. High diversity exists at these sites. The Saskatchewan Conservation Data Centre also reports observations of several identified species at risk (as shown in the adjacent map).

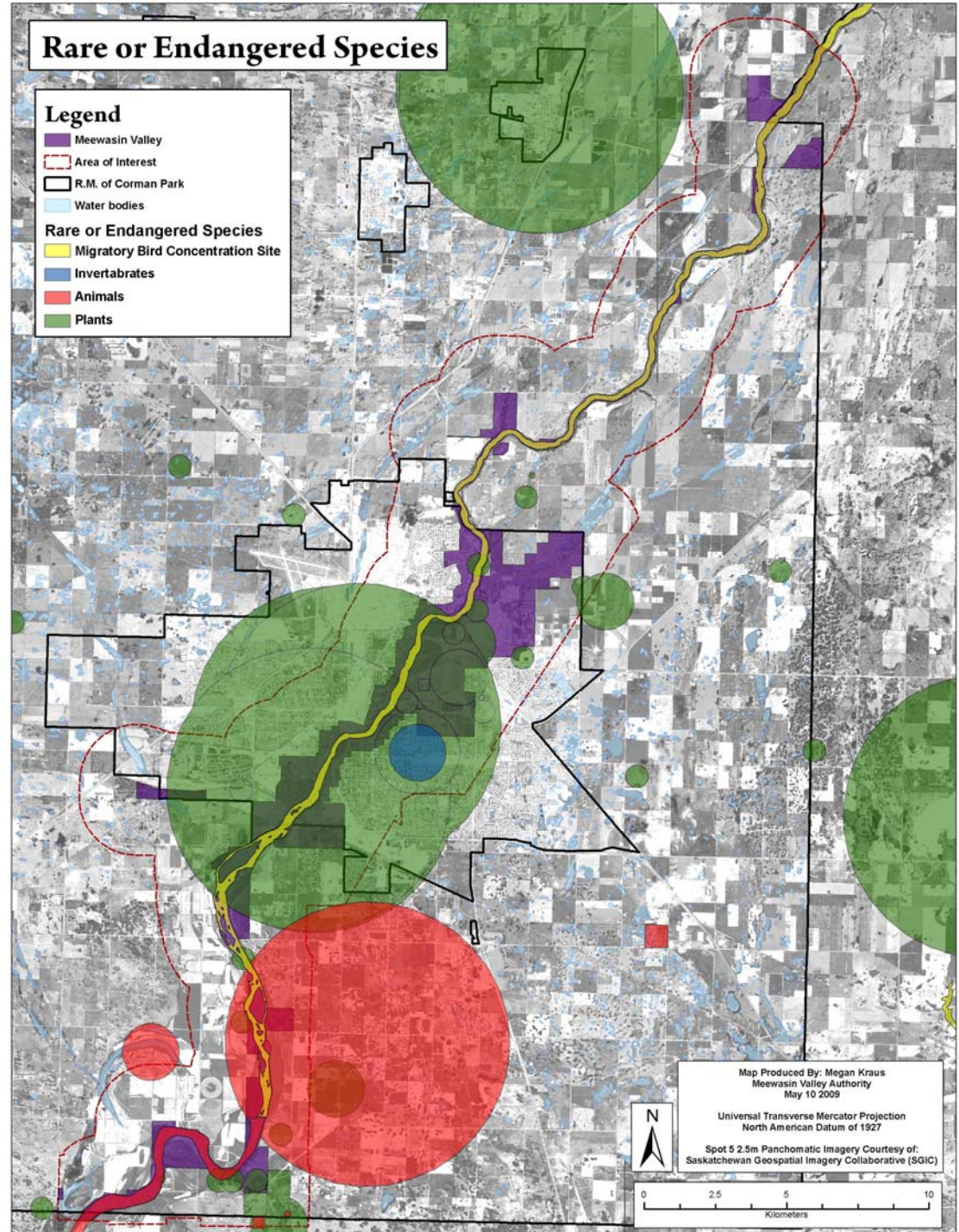
Examples:

Saskatoon Natural Grasslands:
150 species observed

- 10 mammals
- 23 butterflies
- 117 birds

North East Swale:
207 species observed

- 16 mammals
- 7 butterflies
- 3 amphibians
- 181 birds



Health

Ecological Integrity/Conservation of Nature

Conservation of nature does not occur in a steady state. Change as a result of stressors must be mitigated through resource management activities. These introduced disturbances attempt to mimic natural processes that would have occurred before the stressors appeared. Initiatives include grazing, prescribed controlled burns, restoration through weed control, seeding and planting, etc.

Indicator: Resource management effort

Status:

Of 18 key habitat sites within Meewasin Valley, 17 have been inventoried, and 12 receive active resource management effort.

Sites:

Clark's Crossing
Guenther Prairie
Silverwood Riverbank
Sanatorium Property
Maple Grove & Yorath Island
Richard St. Barbe-Baker
Chappell Marsh
Poplar Bluffs & Wilson Island
Northeast Swale
Episcopal Lands
Peturrson's Ravine
Regional Psych Centre Prairie
Chemical Landfill/Buffer Lands
Saskatoon Natural Grassland
Cosmopolitan Park
Chief Whitecap Park – no inventory
Cranberry Flats
Beaver Creek

Grazing



Burning



Seeding



Health

Ecological Integrity/Conservation of Nature



Indicator:
Monitoring
conservation efforts

Status:
11 key conservation
areas and 3
conservation
easements are
annually audited.

EXPECTATION: Maintain ecological integrity.

ASSESSMENT: Protection of habitat land alone does not constitute conservation. A lot of effort has been put toward maintaining the integrity of river, riparian, valley forest, and upland prairie ecosystems. Through benchmarking, future assessments will be more precise. While ecological integrity remains in the Meewasin Valley, change is occurring. Annual audits indicate some habitat sites are improving in quality while others are stable or of diminishing quality.

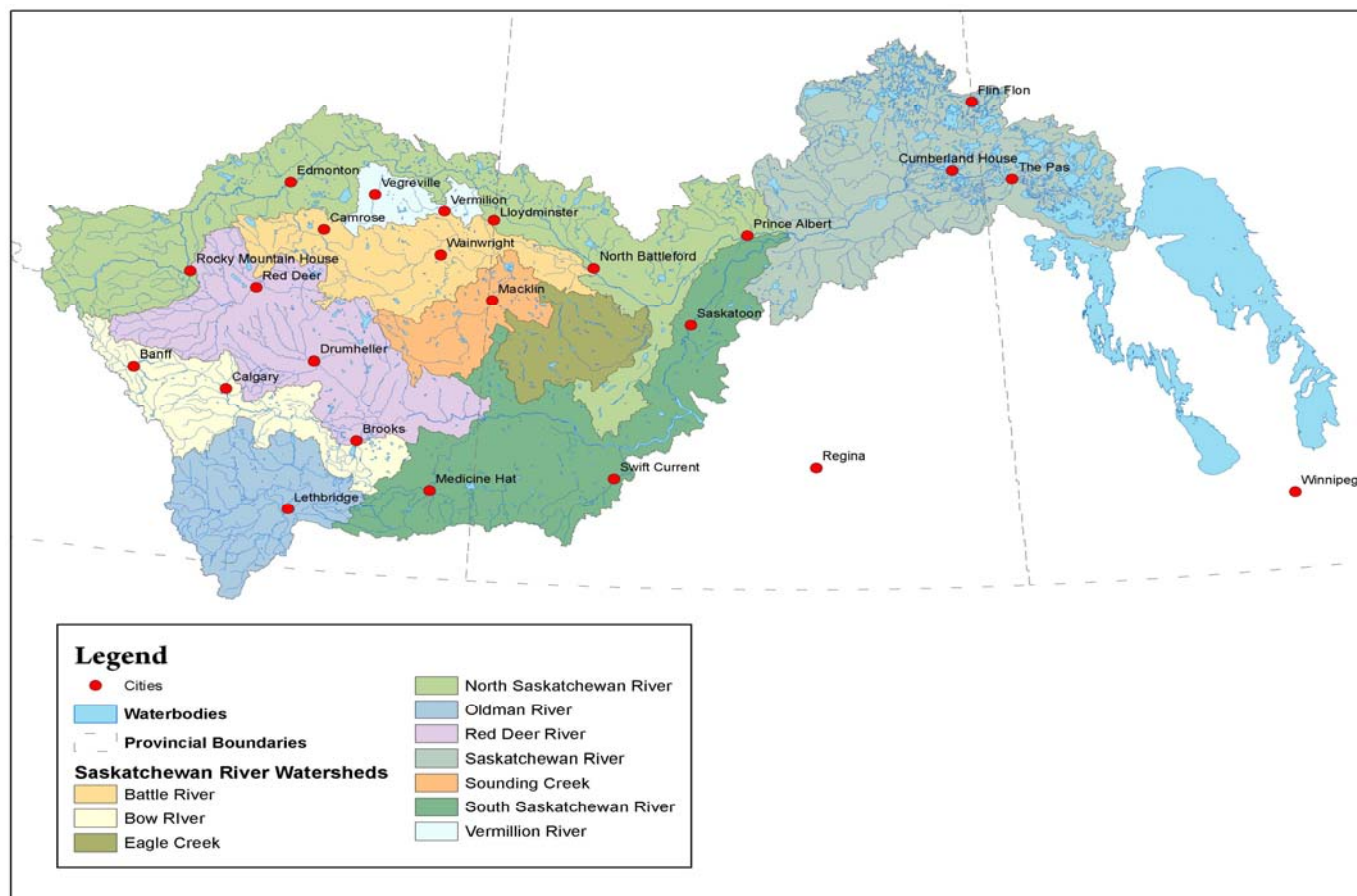


GRADE: *Meets expectations.*



Health

Source Water Protection

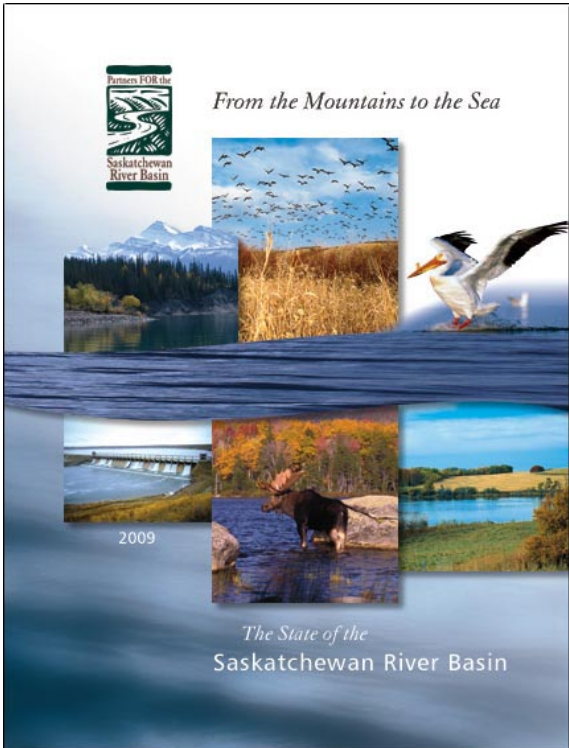



The Meewasin Valley is a small part of the larger South Saskatchewan River watershed, which is only a portion of the Saskatchewan River Basin. As a conservation organization, a leadership role in source water protection is expected.

Indicator	Status
Watershed planning	<p>Meewasin has a permanent board seat on the South Saskatchewan River Watershed Stewards. A Source Water Protection Plan has been drafted and approved for implementation.</p> <p>Meewasin is the managing partner in Partners FOR Saskatchewan River Basin. The first State of the Basin Report is now complete. This document may serve as a pre-cursor to the development of an integrated source water protection plan for entire basin.</p>


Health

Source Water Protection

Indicator	Status
<p>Water quality improvement</p> 	<p>The State of the Basin report indicates water quality is mesotrophic (ie. biological conditions within the river are of intermediate quality). Water quality is strongly connected to flow conditions with nutrient loading evident from upstream irrigation and the wastewater treatment plant.</p> <p>According to data compiled by the Watershed Awareness Initiative, the stretch of river passing through Saskatoon has the following features and issues:</p> <ul style="list-style-type: none"> – 15 species of fish documented with evidence of spawning and adult-holding habitats – Moderate stress from farm fertilizer – Moderate stress from pesticide use – Moderate stress from livestock densities – Moderate stress from loss of wetlands – High stress from manure application to agricultural lands – Stressed rangelands – Riparian buffers generally not large enough outside Meewasin jurisdiction (40 m minimum desired)
<p>Riparian health</p> 	<p>Riparian health assessments are being completed for all public land within the Meewasin Valley to set a benchmark for riparian function. Plans to assess privately-owned riparian areas are being developed in partnership with the South Saskatchewan River Watershed Stewards. Meewasin is actively engaged in riparian restoration initiatives include planting and clean-ups on both public and private lands.</p>

Health

Source Water Protection

Indicator	Status		
Monitoring 	<p>Benchmarking of key natural and human influences on the watershed has begun. Meewasin responds to public complaints and pro-actively monitors the river on a seasonal basis.</p> <table><tr><td>NATURAL INFLUENCES: climate, topography, geology, soil cover, vegetation, fire, wildlife, influences of aquifers, thermal stratification, erosion, atmospheric deposition, etc.</td><td>HUMAN INFLUENCES: agricultural cropland runoff, livestock grazing, dairies and feedlots, urban development runoff, septic tanks, erosion, recreation, industrial & wastewater discharges, spills and releases, etc.</td></tr></table>	NATURAL INFLUENCES: climate, topography, geology, soil cover, vegetation, fire, wildlife, influences of aquifers, thermal stratification, erosion, atmospheric deposition, etc.	HUMAN INFLUENCES: agricultural cropland runoff, livestock grazing, dairies and feedlots, urban development runoff, septic tanks, erosion, recreation, industrial & wastewater discharges, spills and releases, etc.
NATURAL INFLUENCES: climate, topography, geology, soil cover, vegetation, fire, wildlife, influences of aquifers, thermal stratification, erosion, atmospheric deposition, etc.	HUMAN INFLUENCES: agricultural cropland runoff, livestock grazing, dairies and feedlots, urban development runoff, septic tanks, erosion, recreation, industrial & wastewater discharges, spills and releases, etc.		

EXPECTATION: Play a leadership role in source water protection.

ASSESSMENT: Meewasin has a recognized role among the many authorities, organizations, and individuals with an interest in water. Through benchmarking, assessments, and the collection and compilation of more quantitative data, Meewasin will be able to determine whether Meewasin is meeting expectations with respect to an improvement in water quality and reduction of pollution within the Meewasin Valley.

GRADE: *Meets expectations.*



Fit

Public Support

Support for the Meewasin Valley Authority has remained consistently high (ranging from 80% to 90+%) since public opinion surveying began in the 1980's.

Indicator	Status
Meewasin should continue its work	91% of respondents to the recent public opinion survey agree
Meewasin contributes to quality of life	88% of respondents to the recent public opinion survey agree
Meewasin helps attract visitors to the region	84% of respondents to the recent public opinion survey agree
Meewasin is a good investment of tax dollars	84% of respondents to the recent public opinion survey agree

EXPECTATION: The general public believes Meewasin balances conservation and development well.

ASSESSMENT: Public opinion remains strong.

GRADE: *Meets expectations.*



Balance

Public Shoreline

Indicator:

Proportion of shoreline accessible to the public

Status:

95% (29 kms)
public within
Saskatoon
33% (30 kms)
public within the
RM of Corman
Park

Trend:

9 kms of additional
shoreline is now
publicly-accessible

Indicator:

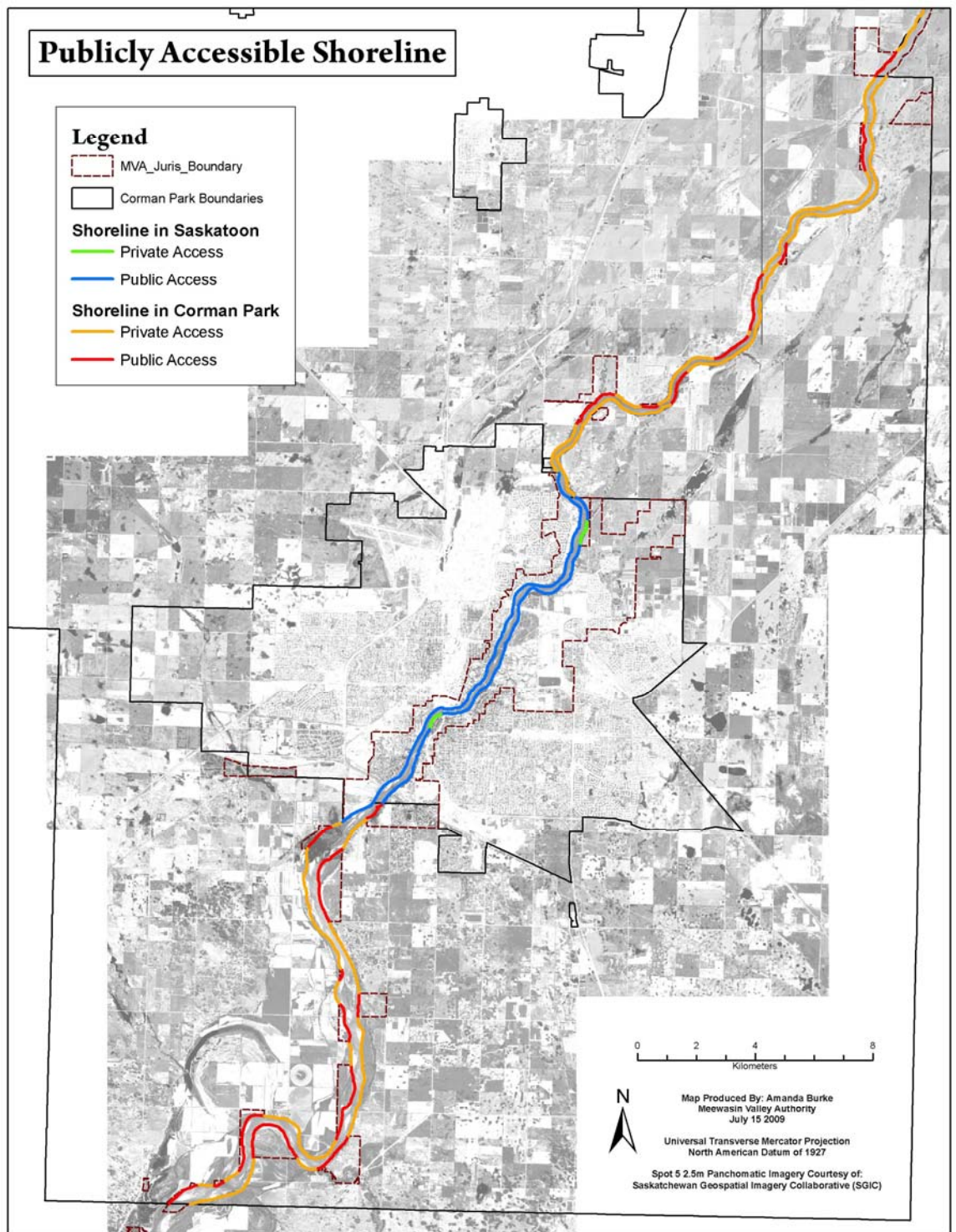
User ratio: public
shoreline
length/person

Status:

0.57 metres/person

Trend:

Up from 0.24
metres/person



Balance

Public Access Points

Indicator	Status	Trend
Conservation areas	9 sites	No change
Nature experience areas	8 sites	1 new site: "Maryville"
Riverbank parks	12 sites	No change
Destinations	2 sites	1 new site: Riverfront
Cultural heritage sites	3 sites	New designation: Factoria, Rocky Island, Wanuskewin

EXPECTATION: Balance the number of public access points to the river.

ASSESSMENT: A broad mix of types of public access points can be found throughout the Valley (good geographic distribution).

GRADE: *Exceeds expectations.*

Indicator:

North-South balance in use

Status:

12 nodes (5 active) in South

21 nodes in Central area

0 Nodes in North

Trend:

Recreational opportunities are slow to develop in the North (what exists is all within city limits).

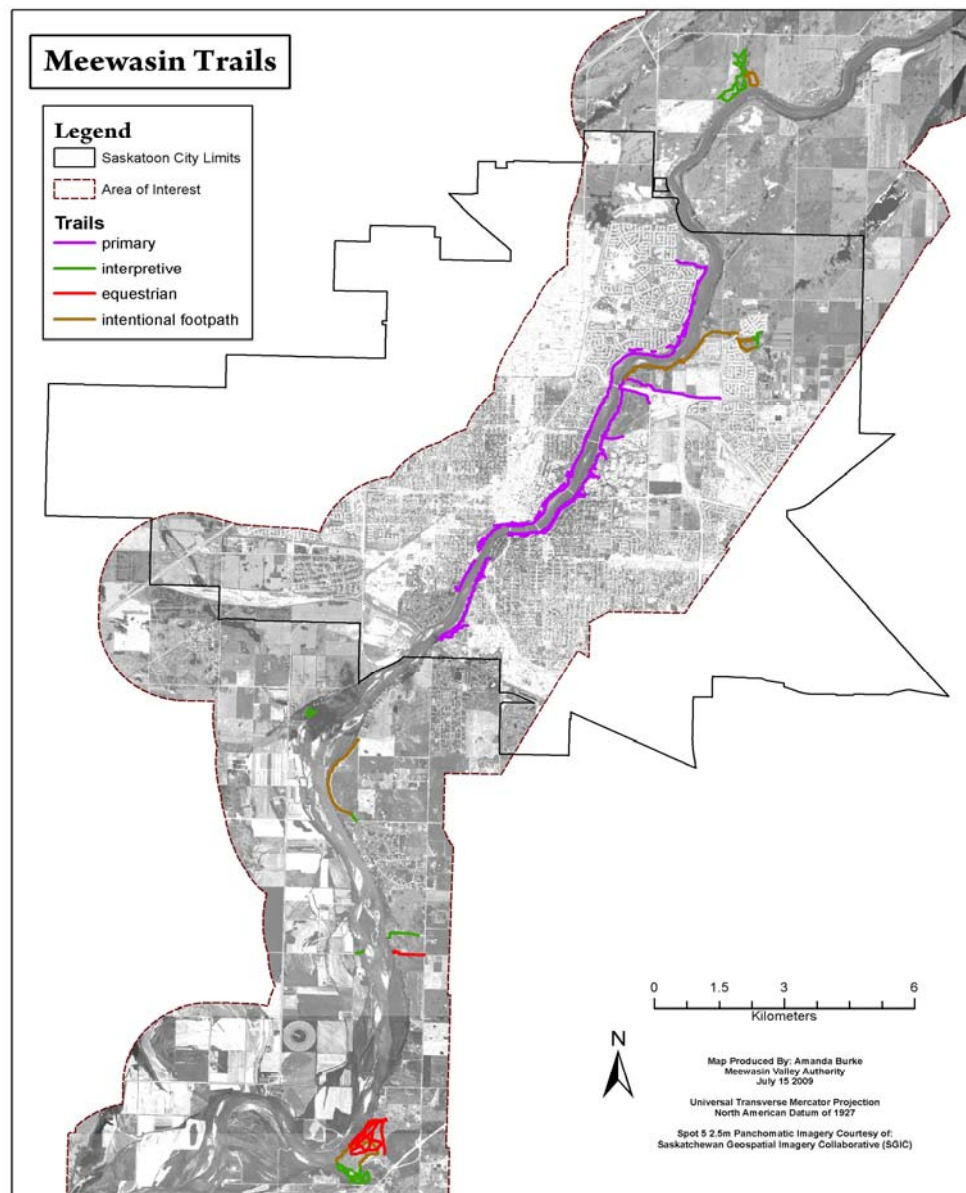
EXPECTATION: Balance the number of public access points to the river.

ASSESSMENT: 100-Year Plan called for reduced pressure on the sensitive resources of the south and greater development of recreation opportunities in the north. This has not occurred outside city limits.

GRADE: *Needs improvement.*

Balance

Trail



Indicator	Status	Trend
Primary Trail	36.6kms	4.9kms upgraded at Riverfront
Interpretive Trail	9.8kms	2.3kms added to the Valley
Equestrian Trail	8.1kms	No change
Intentional Footpath (new)	10.2kms	New designation: Saskatoon Natural Grasslands & RPC Prairie

EXPECTATION: Provide a trail system with and connecting to the Valley to accommodate a variety of users.

ASSESSMENT: The pace of trail expansion slowed, but the variety of trail experiences expanded. Total trail distance was extended by 7.15kms.

GRADE: *Meets expectations.*

Balance

Land Use Mix

Maintaining quality within an ecosystem has a strong correlation to habitat size. Meewasin has been tracking the size of habitat parcels, connectivity between them to accommodate wildlife corridors, and assessing the proportion of land in habitat since 1993.

Indicator	Status	Trend
Proportion of land in habitat (including the river) in the Valley	Approximately 49% of the land base within the Valley is dedicated to habitat	Down from 50% over last 10 years
Proportion of land in habitat within a watershed area of 500m	Approximately 33% of the land base is habitat	Down from 34% over last 10 years
Proportion of land in habitat within a watershed area of 1km	Approximately 27% of the land base is habitat	Down from 28% over last 10 years
Proportion of land in habitat within a watershed area of 2kms	Approximately 23% of the land base is habitat	Down from 24% over last 10 years
Fragmentation of habitat in the Meewasin Valley	71% of habitat parcels are less than 1 acre in size but highly connected	Improvement over 10 years when 73% of parcels were <1 acre
Fragmentation of habitat outside the Meewasin Valley	Geographic differentiation from north to south as habitat is highly fragmented south of Saskatoon outside the Meewasin Valley and more connected in the north	Habitat fragmentation is a growing issue outside the Meewasin Valley

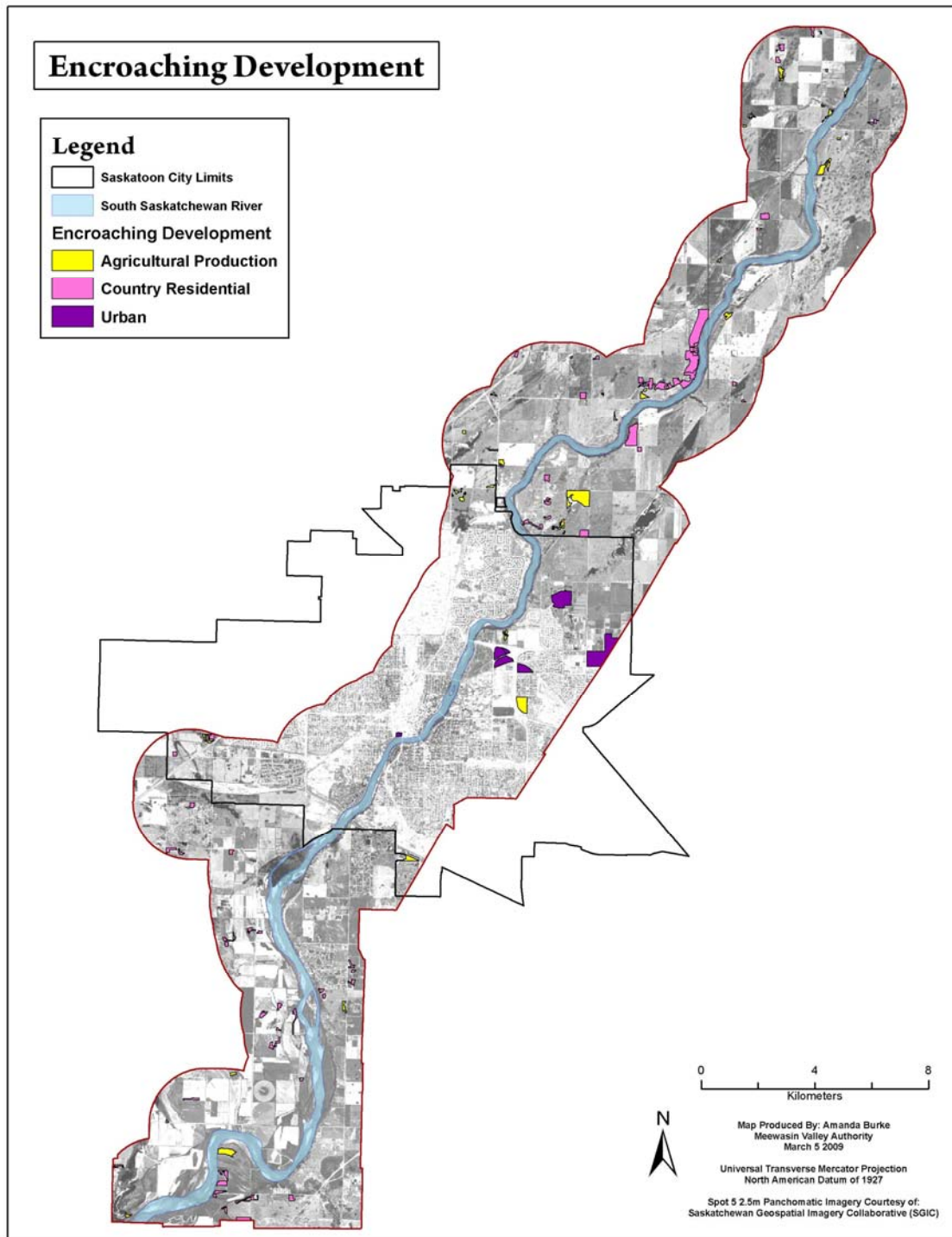
Trends in land use change over the last five years have been tracked and are mapped on the following pages.

Indicator	Status	Trend
Encroaching development	1355 acres of habitat were lost to development in last five years	Continued loss to agricultural production, residential and industrial development.
Increasing conservation values	1608 acres of land gained conservation value over last five years	Past improvements in conservation value occurred only in the Valley. This trend outside the Valley is new.

EXPECTATION: Balance human use and conservation through land use.

ASSESSMENT: Economic growth has impacted habitat. Conservation efforts and education have helped reduce pressures that result from land-use change.

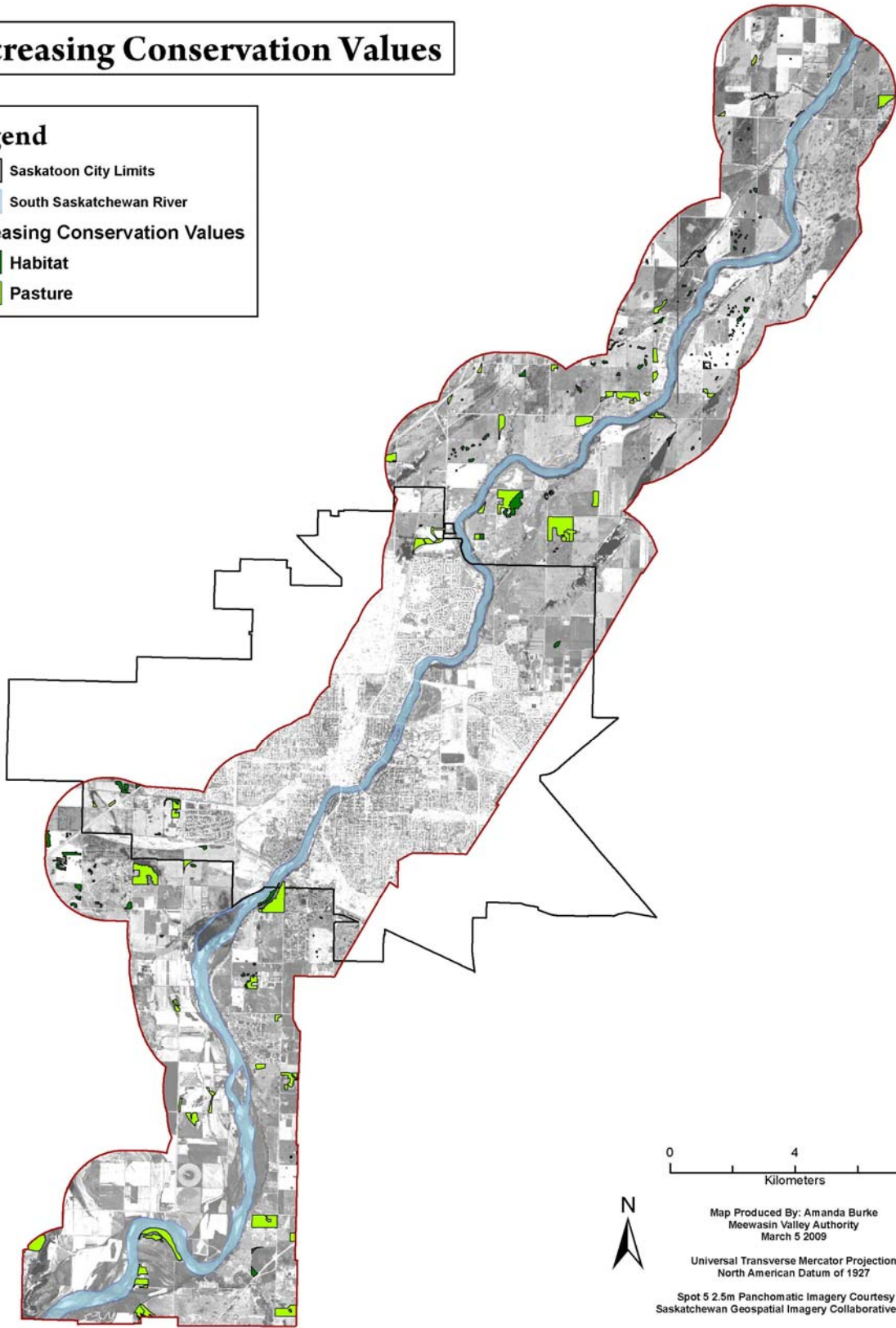
GRADE: *Meets expectations.*



Increasing Conservation Values

Legend

-  Saskatoon City Limits
-  South Saskatchewan River
- Increasing Conservation Values**
 -  Habitat
 -  Pasture



0 4 8
Kilometers



Map Produced By: Amanda Burke
Meewasin Valley Authority
March 5 2009

Universal Transverse Mercator Projection
North American Datum of 1927

Spot 5 2.5m Panchromatic Imagery Courtesy of:
Saskatchewan Geospatial Imagery Collaborative (SGIC)

Vibrancy

Green Space

The long term conservation of the Meewasin Valley requires a stewardship ethic among citizens and visitors. People learn to respect and protect the natural world when they have opportunities to interact with nature. For this reason, improving and extending recreational opportunities was identified in the Meewasin 100-Year Plan.

“Green space” as a land use does not include habitat but land set aside as open space for recreational programming, trail or other corridors.

Indicator	Status	Trend
Acres of green space	468 hectares (1156 acres)	Small loss (32 acres)
User ratio: green space/person	0.005 acres/person (within the city of Saskatoon, green space/person averages 0.007 acres/person)	Down from 0.006 acres/person
User ratio: trail length/person	0.31 metres/person	Up from 0.29 metres/person

EXPECTATION: Ensure adequate green space.

ASSESSMENT: Development/retention of green space has not kept pace with population growth. City standard for green space is 0.01 acres/person. Meewasin will not likely ever achieve this standard as it would threaten habitat within the valley. However, over-use of recreation sites is damaging. Trail length has been added, but not primary trail.

GRADE: *Needs improvement.*

It is important to note that trail length per person has improved, but geographic distribution of trail is not keeping pace with the development of the city. As an example, the north east quadrant of the valley has seen the development of two new neighbourhoods since the trail was last expanded in that direction.



Vibrancy

Continuum of Uses Facilitated

Indicator	Status
Intentional Passive uses	Site analysis indicates the following uses are facilitated: <i>strolling, bird-watching, fishing, limited picnicking, wildlife viewing, passive contemplation, historical and cultural connection, art appreciation, river views</i>
Passive uses observed (un-intentional)	Public opinion survey responses indicate there is greater demand for the following: <i>picnic areas and nature experience areas</i> . Site use analysis indicates the following uses could be better facilitated: <i>picnicking, river access, interpretation of flora/fauna and ecological function, hiking</i>
Intentional Active uses	Site analysis indicates the following uses are facilitated: <i>cycling, running, limited cross-country skiing, limited hiking, dog-walking, casual sporting activities, canoeing/kayaking, limited power boating, limited tobogganing, skating, equestrian</i>
Active uses observed (unintentional)	Public opinion survey responses indicate there is greater demand for the following: <i>children's play, community trail connections, and expanded trail</i> . Site use analysis indicates the following uses could be better facilitated: <i>hiking, cross-country skiing, off-road biking, skate-boarding/long-boarding, snow-boarding, tobogganing</i>

EXPECTATION: Provide for both active and passive recreational use of the Meewasin Valley.

ASSESSMENT: Unintentional uses can have a negative effect on the natural and cultural heritage resources of the Meewasin Valley. A method for facilitating unintentional uses must be developed (even if it is informal, it should be intentional). The list of facilitated active and passive recreational uses is large.

GRADE: *Meets expectations.*

Where Nature and Society Intersect

Fit: Development and Education Results

The Moriyama Report identified a role for Meewasin in the area of “fit” as *the enlargement of educational and research opportunities... and the improvement and extension of recreational opportunities*

Development and Education results are benchmarks from the Meewasin strategic plan to help understand whether these outcomes are being achieved. The benchmarks for fit for 2008 are listed in the table below.

Indicator	Status
Development: Trail	Approximately 7kms of new trail have been added to the Meewasin Valley.
Development: Facilities	Riverfront developed Asset replacement planning begun
Development: Legacy donations	Plant-A-Tree, benches & bricks, Riverfront Campaign, endowment fund, etc.
Development: Sustainability	“Green Team” established at Meewasin to improve environmental footprint of operations
Development: Naturalization	St. Joseph High School & Gabriel Dumont Park
Education: Existing audiences	Grade 3 (MVC) and Grade 5 (Beaver Creek) and general public programs continue; Trail Ambassador program; Pelican Watch; Clean-Up Campaign; etc.
Education: New audiences	Canoe Tours; special partnerships/celebrations (eg. Centennials); Yellow Fish Road; Saskatoon Natural Grasslands curriculum module; St. Joseph wildlife conservation module; climate change themes; cultural diversity themes; media relations; public speaking engagements; etc.
Education: Research	List of historic, ongoing, and desired research projects under development to be shared with academic community.

EXPECTATION: Increase experiential, educational & research opportunities.

ASSESSMENT: Goals for development and education are set every five years. Achievement toward these goals is measured in an Effectiveness Report. Most identified goals have been achieved over the last five-year period. Riverfront was developed beyond the expectation of the last Plan (achieving both development and

education goals). There was one trade-off, only 7.15kms of trail was added to the Valley. The goal was 10kms.

GRADE: *Meets expectations.*

Vibrancy: Community Capacity

The conservation, development, and education mandates of Meewasin are not delivered in a vacuum. The community context in which Meewasin works has a direct bearing on the type of outcomes that appear on the ground. For this reason, several simple indicators related to community capacity have been identified in the table below.

Indicator	Status
Understanding of the natural system	Benchmarks for capacity include lists of education resources at the primary, secondary, and post-secondary levels.
Conservation values	Benchmarks for awareness established (eg. land-use decisions, demand for natural areas, interest in stewardship volunteer opportunities, public opinions).
Articulated plans implemented	A new planning hierarchy has been created to update older plans and bring a consistent planning scope to the entire Meewasin Valley. Tracking implementation will be benchmarked.
Resources available for protection	Benchmarks established for government and corporate interest in stewardship.
Cultural capital	Benchmarks yet to be established. Awareness of the importance of the cultural arts has increased (eg. Cultural Capital designation).
Rural-urban relationship facilitation	Matrix of partnership breadth and depth created.

EXPECTATION: Accept the natural system as the basis for planning. Facilitate cultural expression to stimulate balance (ie. harmony among nature and people).

ASSESSMENT: Meewasin is highly integrated into the community including relationships with private, public, non-profit, and academic sectors. The result is a growing community capacity to implement the 100-Year Plan.

GRADE: *Meets expectations.*

Future Assessment

This report documents those indicators Meewasin is, at present, able to track to determine whether the desired outcomes are being achieved. The assessment process has grown over time to include a greater number of indicators to provide both a broader and deeper understanding of outcomes. It is anticipated greater clarity and focus on results will continue to be the focus of future reports.

Potential Indictors for Future State of the Valley Assessments

Quantitative scores to clarify each expectation

Value (in dollars) of ecological services provided by habitat to region

Limits of acceptable change in land-use

Measures of stability and resilience within dynamic systems:

- More stable water cycles (flood and drought moderation)
- Better water quality
- Healthier habitats, with more diverse flora and fauna
- Corridors to connect flora and fauna with one another, to allow for seasonal movements in response to change
- A meaningful connection to nature for the people within a community

Scored assessments of clean air, soil, and water:

- Air quality
- Water quality
- Soil quality
- Aquatic habitat
- Upland habitat
- Wildlife corridors
- Habitat balance (ie. control of pollution; ample space for fish and wildlife feeding, reproduction, rearing, and rest; food; vegetation cover for fish and wildlife feeding sites, shade, shelter, hiding spaces, and camouflage; access/escape routes; etc.)



Quality of life indicators:

- Fish and wildlife close by
- Visual, spiritual and real connection to nature
- Appreciations of heritage and cultural resources such as natural heritage resources, historic sites, cultural landscapes
- Relief from urban pressures (noise, crowding, bustle)
- Environmental education
- Livability for low-cost
- Places for recreation and exercise
- Healthy transportation alternatives
- Community spirit (eg. opportunities for community volunteers to participate; creating a natural legacy for future generations; neighbourhood identity; etc.)
- Tourism (ie. things to see, things to do, things to learn)
- Water supply
- Management of non-point-source pollution
- Transportation and Utility corridors

