

Feedback Offered on Sustainability/Energy/Conservation November, 2017

Staff was requested to respond in their respective specialty areas to top priorities, best management practices and environmental awareness topics. The sustainability context in the following pages is defined as “the capacity of a community to endure with the wise use of environmental resources (November 2009, American City and County)”. The City has a strong and supportive history and current conditions to report.

Policy Leadership

- As an individual, Mayor Mary Hamann-Roland was a voluntary signer of the U.S. Mayors Climate Protection Agreement, also known as the Kyoto Protocol, in 2005.
- The Mayor became an Advisory Committee member on behalf of the MN League of Cities to the formation of MN GreenStep Cities in 2009.
- The GreenStep framework is foundational for the City Council to address sustainability/energy/conservation awareness and performance.
- The City is a partner with Independent School District 196 and the State of Minnesota in the creation of the School of Environmental Studies (SES). Created in 1994, SES is an award winning high school (grades 11 and 12) co-located with the Minnesota Zoo. Students are immersed in the study of environmental topics and often work alongside professionals in the field providing benefit to our local environment.
- Other partnerships also included those with ISD 196 and Uponor related to S.T.E.M. pre-K-12 curriculum and the development of students and future workers that are knowledgeable of sustainability/energy/conservation concepts.
- Letter of Support offered by the City Council to MPCA to be a host location for developing jobs in the green energy field, July 22, 2010.
- Direction, by City Council Resolution, June 9, 2011, to be a GreenStep Cities Program participant.
- Apple Valley achieves a Step 3 GreenStep status, June 23, 2015. (There were only 3 steps at the time, now 5 steps)
- Apple Valley has been the lead organization in 2016 and 2017 for sponsoring two County wide workshops and one focus group discussion with the Sustainability Alliance in support of the 2040 Comprehensive Plan update. (notes are attached)
- In the City issued Economic Development Video, “Sustainanomics” is a guiding word that describes the positive aspects of a triple bottom line of 1) a highly skilled workforce 2) an energy efficient environment, and 3) your economic success when forming public private partnerships. By 2017, the Urban Land Institute reports the analytics on green infrastructure and water management demonstrates added public and private value.
- The City’s various departments are encouraged to evaluate their policies and operating procedures to seek opportunities to achieve energy savings through operational activities and purchasing.

Public/Private Partnerships in Apple Valley

- Staff routinely works with land use applicants to optimize energy efficient buildings, materials and sites through new development and reinvestment, always encouraging best practices within a supportive regulatory environment.

- Uponor is known for manufacturing the crosslinked polyethylene tubing (PEX) for radiant heating and cooling in development. Also a leader in the green product industry, their last two manufacturing expansions at their headquarters in Apple Valley (140,000 sq. ft.), 2015 to present, seek a LEED silver recognition for building and material choices.
- The active sand and gravel mining area at County Road 42 between Flagstaff Avenue and Pilot Knob Road presently encompasses 412 acres. The 2030 Comprehensive Plan guides a majority of this land as “mixed business campus” after mining; leveraging higher density commercial use of land and best practice storm water management which becomes an amenity.
- The Metropolitan Council is supportive of sand and gravel mining as it leverages the use of natural resources first before development occurs that forever restricts access to the material. Fischer Sand and Aggregate has supplied the materials to meet regional needs by the building construction, road repair and replacement and updating of airport runways.
- Sustainability includes the retention and expansion of businesses in the downtown. Wings Financial acquired and is completely renovating a 65,000 sq. ft. office building for continued use. More broadly in the downtown and along 147th Street, the retention and expansion of business between 2011 and 2015 has added \$110 million in improvements.
- In 2005, the City of Apple Valley master planned 60 acres of land to advance the planned redevelopment of the no longer viable Southport field. The area became a compact mixed use neighborhood of commercial, housing, hospitality, service and recreation centered at 153rd Street and Galaxie Avenue. Known as the Central Village, the area is a walkable, new urbanist location served by the Apple Valley Transit Station less than ½ mile away.
- The City continually monitors alternative energy technologies. An example is the City’s Liquor Store 3 which uses a geo-thermal well field located under the parking lot to provide for its heating and cooling needs. More broadly, the City has actively worked with energy technology partners to investigate the possibility of alternative energy sources such as: district heating, wave, biomass, solar panels and wind turbines.

City Facilities

The City of Apple Valley has invested in our community's sustainability by building green buildings and renewing existing facilities with energy efficiency improvements such as energy efficient lighting, lighting motion controls, and programmable mechanical controls. Two nationally recognized rating systems, LEED and Green Globe, measure and recognize efficient building attributes. A sampling of the City's efforts in this area include the following:

- Municipal Center: An early “green” civic building (circa 2001) features extensive use of daylight to minimize artificial lighting, energy control systems, and an innovative storm water management system that was guided by evolving LEED standards.

- Apple Valley Senior Center: Certified as Two-Globes under the Green Globe rating system, this facility makes use of daylight harvesting, in-floor radiant heating and features a green roof.
- Apple Valley Liquor Store #3: Also certified as Two-Globes, this building utilizes a geothermal heating/ cooling system to minimize energy usage for the store and its coolers.
- Valleywood Clubhouse: Certified as Three-Globes, this building features extensive use of daylighting to minimize artificial lighting among many energy efficient elements.

Building Retrofits

The City has used ARRA funding and energy performance contracts to install energy efficient lighting and automated building lighting and HVAC controls in many of its facilities. The City also worked in partnership with Dakota Electric to establish an LED street light test zone so that new street light fixtures can be tested before broader implementation.

- 2009-2013 ARRA EECBG Project - \$688,974.09
- 2013 Ameresco Project - \$899,650.00
- 2017 Ameresco Project - scope definition, cost and cost saving still being determined. Anticipated to offer increased efficiency and savings at multiple buildings.

Better Energy Partnership

The City encourages homeowners to invest in their properties through energy efficiency upgrades. The City teamed up with Dakota Electric, CenterPoint Energy, and the Center for Energy and Environment through grants from the Joyce Foundation and the Environment and Natural Resources Trust Fund to encourage homeowner participation in the Better Energy program. The two-year program yielded 780 home participants and installation of 16,680 CFL light bulbs, 759 low-flow shower heads, and 1,491 low-flow aerators. 149 homeowners completed major upgrades like attic insulation or furnace, boiler, or hot water heater replacement.

- The Apple Valley effort has many additional partners due to the GreenStep affiliation and framework: Minnesota Pollution Control Agency, Great Plains Institute, League of MN Cities, MN Department of Commerce, Urban Land Institute, Preservation Alliance of MN, Great Lakes Institute.
- The Dakota County Community Development Agency is a partner by providing weatherization, loan and grant programs for lower income residents.

Promoting Transit and Bike-Friendly Options

The City is home to the Metro Transit Red Line which provides easy access to major metro area destinations through the growing transitway system of the Twin Cities. The City is also served by the Minnesota Valley Transit Authority (MVTA) which provides over 2.8 million rides per year to residents in the south metro area. Our growing transit ridership helps to alleviate roadway

congestion and vehicle emissions. The City is also home to over 221 miles of bicycle/walking trails, pathways and sidewalks that provide an alternative to automobile use.

To 2040, the strategy that will expand transit service and infrastructure on the Red Line and County Road 42 will continue to require:

- Good system design; the best ridership in the worst weather and the safest crossing of Cedar Avenue and County Road 42 for pedestrians
- Getting people where they want to go
- Moving people quickly
- Having it be an experience people want to repeat
- Routes that shape and support adjacent growth and investment
- The ability to add to the systems with connecting routes and networks; a mix of express, rapid and local services

Examples of Best Practices for Natural Resources and Infrastructure

The Public Works and Park and Recreation City Departments play a key role in the best practice management of the natural resources and infrastructure of the City. The following is a listing of notable topical areas with specific examples related to sustainability/energy/conservation.

Natural Resources Volunteer Efforts

- Apple Valley offers a number of volunteer opportunities for residents who would like to contribute to improving the quality of Apple Valley's natural resources. The City arranges for volunteers to collect water quality samples from five local lakes through the Metropolitan Council's Citizen Assisted Monitoring Program (CAMP). Volunteers also help evaluate the health of Apple Valley wetlands through the Wetland Health Evaluation Program (WHEP). The City has also partnered with Great River Greening to restore habitat health in Alimagnet Park through the removal of invasive buckthorn.

Solid Waste

- Recycling Collaboration – Dakota Valley Recycling is the partnership recycling department for the Cities of Apple Valley, Burnsville, Eagan and Lakeville that connects residents and businesses to recycling, composting and waste disposal information.
- Annual Fall Clean-Up Day
- The City modified the trash hauling ordinance to facilitate single day zones throughout the City in 2009. Less neighborhood disruption and reduce vehicle miles traveled were the outcome.

Food

- Annual Farmer's Market (June through October) hosted at the Apple Valley Municipal Center
- Collaboration with 360 Communities and other Food Shelves in Apple Valley
- Open Door Pantry – Food Distribution at Cedar Knolls Park and the Energy Park warehouse location
- Community Garden at Cedar Park Elementary School

Non-Motorized Transportation Initiatives

- League of American Bicyclists – Honorable Mention

- Trail development efforts – North Creek Greenway from the MN Zoo to Cobblestone Lake
- Bike Friendly Apple Valley Initiative annually
- Participation in Dakota County’s Central Greenway Connectivity Study
- Annual Le Tour de Apple Valley Bike Ride to Promote safe bicycling in the community

Water Quality

- The City stormwater program <http://www.ci.apple-valley.mn.us/index.aspx?NID=372>
- Undertaking comprehensive water quality and hydrologic modeling throughout a good portion of the city. This is part of the SWMP update. Considering a link to climate resilience (rainfall frequencies have changed with climate change and modeling characterizes the extent of impacts on city infrastructure)
- Participation with Black Dog Watershed and Vermillion River Watershed organizations
- Cobblestone Lake - Redevelopment activity that creates over 0.2 acres of new impervious surface shall be required to achieve no net increase in average annual Total Suspended Solids (TSS) and Total Phosphorus (TP) loading compared to existing conditions. Redevelopment activity that creates over 0.2 acres of new impervious surface shall be required to achieve no net increase in average annual runoff volume compared to the 1990 condition. Additional infiltration (both privately owned underground and surface infiltration) has been created with the development of PHS, Dental Health Center and other recent developments
- Redwood Pond - Potential improvements were examined as part of the Keller Lake Subwatershed Assessment and recommendations for improvement were made
- Keller Lake - A Keller Lake Subwatershed Assessment was completed for Keller Lake. This was partially funded by grants. It will help guide stormwater infrastructure retrofits. The report identifies water quality improvement projects, planning level costs, implementation prioritization and timelines in order to reduce the total maximum daily load (TMDL) to Keller Lake. ISD 196 created infiltration basins as part of Southview Elementary and Valley Middle School Renovations. Apple Villa apartments additionally treated storm water from project with the creation of surface infiltration basin and underground storage as part of land use/building permit application
- Long/Farquar Lakes - The Long and Farquar Lakes TMDL Implementation Update was recently completed & adopted by the City Council. This will help guide stormwater infrastructure retrofits.
- Alimagnet Lake - We continue to do water quality monitoring & education for this watershed.
- Recently completed a raingarden retrofit at the Community Center with partial grant funding.

Regulatory Provisions Already in the City Code Related to Environmental Sustainability

- Each land use application undergoes a review for various sustainability elements
- Rain Gardens
- Impervious Surface Mitigation
- Urban Forest Management
- Excerpts from City Ordinance in the Reference Notebook include: Landscaping requirements, on-site infiltration, natural resource management, forestry, water resources and environmental protection

Forestry

- Annual tree sale of preferred species
- Tree City USA for 33 years
- Oak Wilt, Dutch Elm, Emerald Ash Borer monitoring and action

Natural and Maintained Habitat

- Educational focus on water friendly plantings, native plants for pollinators and water quality, trees, erosion and sediment control, invasive species, water conservation.
- The extensive park system of 57 parks close to residents
- Lebanon Hills Regional Park
- Home of the MN Zoo; 500 acres devoted to sustainability
- Plantings / Pollinators strategy being developed in collaboration with the MN Zoo and Dakota County along the North Creek Greenway

Ongoing Environmental Initiatives by Parks and Recreation Department:

- Water treatment/water quality/rainwater gardens
- Organic recycling
- Traditional recycling in parks
- Composting
- Water conservation best practices (rain sensors on irrigation systems)
- Determining sustainable energy options (solar in particular)
- Best practice energy conservation upgrades (building canopy's/lighting upgrades/energy efficient equipment upgrades)
- Alternative fertilizer applications
- Pollinator gardens
- Educational events
- Partnership with the School of Environment Studies
- Tree replacement and care practices
- Bottle filler drinking fountains (Community Center, Hayes Park Arena, and the Municipal Center have eliminated over 15,600 plastic water bottles)
- Partnerships with other agencies on best practices regarding environmental issues
- Extensive leaf collection turned into compost

Land Use and Community Planning

The Community Development Department offers land use planning and development, and economic development services demonstrating best practice public and private outcomes concerning sustainability/energy/conservation. The Department is also the lead facilitator of the 2040 Comprehensive Plan Update. Some examples follow:

- The completion of the 2040 Comprehensive Plan Update according to the statutory deadlines of December 2018.
- Integrating the “Community for a Lifetime” report prepared in partnership with Dakota County as foundational work on being a sustainable community. On an ongoing basis a sustainable community considers transportation options, walkable neighborhoods, housing options, services that support older adults, employed and volunteer opportunity and effective technology.

- The 2030 Comprehensive Plan offered the best practices for Apple Valley as of 2008 in the areas of land use, economic development, parks and active living, and transportation and utilities. A tab in the Reference Notebook provides copies of those documents. Those chapters are being updated for 2040
- Staff will be evaluating Accessory Dwelling Units, which allow for greater land efficiency in single family residential neighborhoods.
- Multi-family developments have an increasing number of units per acre. The limited resource of land is being used efficiently, but not to the detriment of greater neighborhoods. Staff balances best practice design principals to the locations being addressed through development.
- Staff is guided by “suburban intensive” development outcomes; not urban, 4th tier suburban or rural outcomes. The development of fixed rapid bus transit systems transformed the City and introduced opportunity for both walkable, bikeable and drivable design solutions as equally weighted outcomes.
- To the extent possible, land use design solutions include regional ponding with secondary treatment and the opportunity to use the stormwater as a development and neighborhood amenity.

Emerging National Trends in Real Estate – 2018 – Connecting to Sustainability
(Source: Urban Land Institute)

- The workforce will be working smarter and harder and businesses are seeking more output per worker in a tightening labor supply
- Priority importance remains for land and construction costs, infrastructure and transportation solutions, housing costs and availability and capital availability
- Other priorities of a more moderate context are Nimbyism, environment and sustainability, state and local water regulation, wellness/health features in the living and working environment and extreme weather risks. Thoughtful integration in development is occurring.
- Office space superiority in the workplace is getting a greater emphasis. The expected cost savings of telework have not translated into business growth. Placing workers in the same physical space, albeit with creative commons areas, hastens the speed of work and emerging innovation and requires transportation solutions and built space management.