

## **Storm Water Runoff Management and the Use of Rain Gardens:**

As part of possible local street reconstruction in the Skyway Park neighborhood, City of Crystal staff will present rain gardens for consideration by both the neighborhood's residents and the City Council. This flyer explains both runoff management and rain gardens as a list of frequently asked questions and their answers.

### ***What is runoff management?***

The process of managing runoff as a resource rather than a waste product. Runoff has historically been managed by "draining it away" as soon as possible. Management by "draining it away" ASAP results in adverse down stream impacts such as, but not limited to, flooding, erosion, and poor water quality in nearby lakes and streams. Crystal is required to submit a permit to the Minnesota Pollution Control Agency (MPCA) outlining their plan to better manage its runoff. Part of Crystal's plan is that new subdivisions feature ponds that both regulate and treat runoff. However, pond construction in established neighborhoods like Skyway Park is difficult. Crystal must consider other tools to show the MPCA it is better managing its runoff in its established neighborhoods.

If the subgrade soils are right, rain gardens are a tool that the City can apply in established neighborhoods to better manage runoff. We will not know if the subgrade soils are right until soil samples in Skyway Park are analyzed during the summer of 2016.

### ***What is a rain garden?***

A rain garden is a landscaped area located in the City-owned boulevard. As the photo to the right shows, the area is slightly depressed to soak up **some** of the runoff before it can enter the storm sewer pipe network. This decreases the amount of runoff carried by the network to nearby lakes and streams. When plants in the rain garden mature, the rain garden should be disguised as an aesthetic addition to the neighborhood.



The plants can also help runoff reach into deeper subgrade soils and recharge nearby groundwater aquifers. The plants also aerate the garden's soil to maintain its infiltration characteristics. Rain garden plants can handle extended periods of wet conditions. Potential standing water in the rain garden will be designed to dissipate quickly.

### ***Why are rain gardens needed?***

Because of the many impervious surfaces such as streets, driveways and rooftops, it is important to have rain gardens within our cities. Storm water carries pollutants such as fertilizers, pesticides, yard and animal waste, oil and grease, etc. The contaminated water flows from storm drains into local streams, lakes, rivers, and watersheds, and often leads to costly municipal improvements like stormwater treatment structures. Upper and Lower Twin Lakes, where the majority of Crystal's storm water ends its travels, is listed as "Impaired" by the Minnesota Pollution Control Agency. While an individual rain garden may seem like a small thing, collectively they produce substantial environmental benefits.

### ***Who should consider adding a rain garden in the City-owned boulevard in front of their home?***

Rain gardens work best in relatively flat boulevards with sandy, well-draining subgrade soils beneath them. Some boulevards cannot accommodate rain gardens due to poor subgrade soils, steep slopes, or not enough space between the edge of the street's pavement and the right-of-way line. The more rain gardens installed means less runoff carried by the network to nearby lakes and streams. Property owners of corner lots may wish to consider more than one rain garden in the City-owned boulevard.

### ***Who maintains these rain gardens in the City-owned boulevard?***

Rain garden plantings will be selected for low maintenance, which is **not** to say that they are maintenance free. Only for the first two years after installation, yearly maintenance for weeding, mulching, and plant replacement will be conducted by the City. After the first two years, individual homeowners will be responsible for weeding, mulching, and plant replacement. Furthermore, individual homeowners will be responsible for watering immediately following the initial rain garden installation/planting.

### ***If I choose to have a rain garden, will my assessment be more than those without rain gardens?***

No. Selecting this work does not add to your individual assessment. The cost of any rain gardens that could be built as part of this project will be passed along to the **entire** neighborhood because the **entire** neighborhood will benefit from the rain gardens.

### ***What if I just do not want to have a rain garden?***

If you do not want a rain garden, do not like gardening, or do not wish to add to the landscaping of the City-owned boulevard in front of your home, maybe a rain garden is not for you.

Keep in mind: whether you have a rain garden or not, drainage could still be directed to flatter areas located in the City-owned boulevard area next to the street. As with the rain garden, water will pool for short periods of time in these areas until it is able to soak into the ground. Such existing low areas will still function well; however it will not have the same infiltration capabilities as a rain garden can have. During heavy rain events, rainwater in most cases will overflow these areas and spill into the street.

### ***How do I notify the City of my interest in having a rain garden or not?***

Please express your interest by completing the rain garden section of the Property Owner Questionnaire insert and mail it back to Karen Anderson with Short Elliott Hendrickson no later than July 15, 2016.

### ***How can I find out more information about rain gardens?***

The City's website contains a thorough listing of articles regarding rain gardens in street reconstruction projects. If you want more information, we encourage you to type it into your favorite internet browser and review the rain garden articles it contains.

[http://www.crystalmn.gov/city\\_departments/rain\\_gardens.php](http://www.crystalmn.gov/city_departments/rain_gardens.php)

For more information on rain gardens in general, please contact:

- Hennepin County Environmental Services, 612-348-3777
- Minnesota Pollution Control Agency, 651-296-6300
- University of Minnesota Yard and Garden Line, 612-624-4771

We suggest that you visit the Phase 12 Forest North and Phase 13 Becker Park project areas shown in the location map on page 3 of the newsletter to see examples of the rain gardens. If you have questions about rain gardens after reading this flyer, or the information at Crystal's website, please contact one of the people listed on page 4 of the newsletter that came with this flyer.