

PART II CASE STUDIES

A. Evergreen Vale

35929 21st Pl S. #1B
Federal Way, WA

Built in 1988, Evergreen Vale is a secure adult community of 132 units located in South King County. The central valley-like low point was the only reasonable location for the detention pond and drainage swale. The upper end of the “vale” acts as a wide swale but doubles as an amphitheater-like recreation area. The long, centrally located pond/valley allows some separation of the densely packed surrounding apartment units. An artificial streambed within the larger detention pond collects and holds intermittent water.



The upper end of the long detention pond/park at Evergreen shows a perimeter road.



A series of depressions serve as potential storage area and setting for gazebo.

Although it may have been better for infiltration and wildlife to have retained some of the original native vegetation, a variance allowed for the creation of a passive recreational park within the gentle, flattened slopes of the pond. Scattered throughout the park are gazebos, trails, bridges, benches, tables and pea patches which provide year-round amenities to residents. The owners believe that these amenities account for up to 10 percent of the value of the rental units. (Please call the leasing office before visiting.)

B. Ballinger Commons NE 205th St. & 1st Ave. NE Shoreline, WA

Located within sight of Lake Ballinger, the Commons employs a set of three stormwater ponds to protect the lake. The dead storage volume (permanent pool) of the ponds is about equal to the volume of runoff from a 2-year storm. Scientists have found good correlation between ponds of this size and nutrient removal. Large ponds like these have detention residence times long enough for algae to grow,

using up the nutrients carried in stormwater runoff before they can enter the lake. Monitoring has shown these ponds are working fairly well at removing nutrients, and they have also become a healthy habitat in their own right.

The ponds are made more attractive, as well as more functional, by a fountain visible from the highway below. By recirculating the water, loss of oxygen and stagnant conditions, which encourage nuisance algae growths, are avoided.

Streambed may serve as intermittent water and picnic spot.



Paths and arbored benches provide year round amenities at Evergreen.



Yes, there is a stream in the rainy season and a need for bridges.





Fountains are beautiful and oxygen-rich at Ballinger.



Linked ornamental ponds provide a focal point for the community.



Walking trails are lit for night walking.

Although pedestrian access to the water could be better, vistas to the ponds from upslope condominiums are excellent, enhancing views of the lake beyond.

C. Juanita Springs and Springwood

**100th Ave. NE between NE 124th St. and NE 132nd St.
Juanita, WA**

These older, adjoining developments have two types of ponds: dry detention ponds and small ornamental wet ponds connected by open

channels fed by springs. The dry ponds function to slow the rate of runoff during storms. Between storms they are shallow grassed depressions that create open space and a great spot to chase a frisbee or toss a football.

One dry pond is squeezed between a road and stream. It gains storage space by having one vertical side of landscape rock topped with existing trees and an ornamental fence. The other side is a berm behind which lies attractive native vegetation bordering the stream.

The ornamental ponds are permanent landscape features, their water level rising during storms. Two of the wet ponds are terraced on a gentle slope, bordered by paths and winding past condominiums. A swimming pool adjacent to the upper pond overlooks the pond terraces. The complex almost evokes the feeling of a small resort! Here is a good example of using the seepage water found on a site to best advantage – as an asset rather than an engineering problem.

D. Providence Point 228th Ave. SE & Providence Point Drive SE Upper Lake Sammamish Plateau, WA

Dubbed King of the Detention Ponds, few people know or ever realize that this is a stormwater facility. Luckily, incoming stormwater infiltrates quickly, preventing excess grass die-back. Graced by well groomed ornamental plantings, well designed walking trails, a gazebo, bridge and benches this park/pond is a valuable amenity

Gentle slopes provide a fun place for tag football and occasional flood detention.



Naturalistically planted edges and neighborhood mowing make this pond look park-like.



Steep rock walls provide more storage in a tight area.





D
Gentle slopes, trails, ornamental plantings, pavilions and frequent mowing help make Providence Point detention pond an outstanding neighborhood amenity.

for the adjoining senior community that uses it for daily walks, picnics and private conversations. The fountain by artist George Tsutakawa is a local landmark that visiting grandchildren love to splash in.

The original 1987 installation and on-going maintenance costs are more than justifiable. The park/pond is open to the public benefiting both the senior community and the

larger plateau community. Current design manual regulations would probably require a larger pond with water quality functions and road access. Nonetheless, with good design and careful maintenance, esthetic quality could still triumph.

The Tsutakawa fountain provides a stunning focal point at Providence Point.



E
This is one in a series of linked ponds and streamlet resulting from local springs at Meadowbrook wetland.

E. Two Habitat Ponds

Meadowbrook Wetland:
*between NE 105th and NE 107th
 and between 30th Ave. NE and
 34th Ave. NE, Seattle, WA*

6th Ave Pond: *on 6th Ave. W
 between 164th St. SE and 168th
 Pl. SW, Snohomish County, WA*

In 1993 landscape architect Peggy Gaynor designed a series of linked wetland ponds to collect springwater seepage at the base of a low hill and on the edge of a large playing field on the south edge of Nathan Hale

High School in Seattle. Called Meadowbrook wetland, this installation became the model for a more recently installed water quality pond in Snohomish County called the 6th Ave. Detention Pond. By featuring both ponds, we can see a kind of reverse before-and-after developmental sequence. The plantings at 6th Ave. will eventually mature in the way Meadowbrook plantings have.

Instead of planting grass for erosion control Peggy uses a 2-4

As the native plantings mature, Meadowbrook attracts neighbors and wildlife.





A small linked pond is surrounded with natives at Meadowbrook wetland.



A “young” 6th Ave. Pond will mature in the same way as Meadowbrook

inch mulch of wood chips which also retards weed growth and mimics native forest floor conditions. The mulch is interplanted with native plants which have a chance to mature without being smothered in invasive weeds and grass. Varieties of *Carex* and *Scirpus* dot the water’s edge with ninebark, Indian plum, vine maple and other native trees and shrubs planted on higher ground.

No mowing maintenance is required in such plantings but an annual pull of Scotch

broom, alder and blackberry is necessary until the planted natives become established. The Meadowbrook planting has been such a popular neighborhood amenity that all its maintenance has been carried out by volunteers. Recently, the culvert that connected Meadowbrook to Thornton Creek has been daylighted, creating an open, stream-like swale. The flow is so strong and clear that it is now being considered for salmon habitat.

The 6th Ave. detention ponds fulfill all the require-

ments of a classic water quality facility and more. Flatter slopes provide a slightly larger volume in pond size which then allows for the added mass contributed by mature waterside plantings. In typical stormwater ponds which become overgrown, culverted outlets often clog with leaves and woody debris. Peggy solved the problem with a rock and log weir structure that empties to a small wetland on the way to a nearby stream.

The goal of each facility is twofold: to replicate native wetland conditions that purify water on its way to stream, lake or sound and to create beautiful neighborhood places to sit, walk and contemplate the natural beauty of the Northwest. Both succeed beautifully.

F. Meadowbrook Reflective Refuge and Sedimentation Pond

Adjacent to Thornton Creek north of NE 105th Street between 35th and 39th Aves. NE, Seattle, WA

This nine acre site and four-acre detention/sedimentation pond is the jewel of a five year collaboration between the Seattle Engineering Department, Nathan Hale High School and area residents including the Meadowbrook Community Council together with artists Peggy Gaynor, Lydia Aldredge, and Kate Wade.

The project was designed to enhance the water quality of Thornton Creek, decrease sedimentation into Lake Washington and improve flood control. It was also designed to provide an enhanced wetlands facility that will benefit neighbors, students (especially the Nathan Hale horticulture program), fish and wildlife. Even the construction materials

A simple wier handles various storm levels.





This is the heart of the park at Meadowbrook with bridge, pavilion, water spout, and tufa wall.



Native plantings edge the pond.



Panoramic and meditative views can be seen from the footbridge.

have been chosen to be environmentally friendly. The 400 foot-long bridge that spans the center of the pond, for example, is made in part with plastic wood from recycled milk jugs.

The network of ponds, four islands, earthworks and berms have been planted by Nathan Hale High School students and other volunteers with some 5,000 native plants. The facility will continue to serve as a “living laboratory” for students from many area schools. Plantings are similar to the

plantings done at nearby Meadowbrook Wetland (also designed by landscape architect/artist Peggy Gaynor) and will mature in the same fashion.

The site is graced with outstanding environmental artworks including a covered watergate observation deck, an educational flood pool and a reflective refuge area, complete with an inlaid pathway, waterfall, water spout, water mirror and a sound reflector lodged in the face of a grotto-like wall of tufa cement. These amenities

are meant to focus and connect one physically and emotionally with nature and the setting. Wonderful panoramic prospects are provided by the large, winding berms, and foot bridge. Refuge is to be had in small groupings of rocks and benches, under the pavilion and in the enclosure of the tufa wall. There is no way to visit the site and not be lifted into a reflective mood, a lingering stare, a calming of the spirit, deep in the heart of an urban residential setting.

G. Waterworks Gardens

**1200 Monster Rd. SW,
Renton, WA**

Dedicated in 1996, this eight acre, park-like stormwater pond, located next to the East Division Water Treatment Plant in Renton, Washington, is a study in how such ponds can provide public amenities and education as well as habitat and water quality treatment. Conceived as a huge landscape metaphor, the facility is structured to suggest a journey from civilized to wild in the form of a huge blossom when seen in plan view. Paths on the upper knoll lead visitors through tall basalt columns and over steel grates that cover the rush of incoming stormwater. Water is supplied from pumps which

Even the birdcage grille has an esthetic quality.



The astonishing sound reflecting disk and tufa wall are outstanding features.





Basalt columns and rushing water under foot create a striking entrance



The series of ponds – year one



The series of ponds – year three

bring it off the storm drains from the treatment plant parking areas below. The paths wind down the contours of the hillside past ponds, berms, interpretive signs and a fantastic grotto into a large wetland, replete with paths, native plants and a growing population of wildlife.

Seattle artist Lorna Jordan, together with landscape architect Peggy Gaynor, and later Jones & Jones, plus a host of artisans and volunteers designed and built the park as an “open system”. In Jordan’s words: “This really is about an integrated approach. Humans,

engineering, and critters all belong here, and the goal was to build a place where they all worked together.” The gardens provide functioning public space for walkers, joggers, lunchers and hand holding lovers. Author John Beardsley of *Earthworks and Beyond* says, “Instead of relying specifically on the scientific model, (the garden is) drawn from garden history and mythology to create something that’s more visually interesting. We’ve all seen those hideous square collection ponds next to parking lots, and it’s occurred to a lot of us that

more could be done with that problem. So here’s an instance of someone trying to reimagine a nasty problem and deal with it in an imaginative way.” Dave Voigt of Brown and Caldwell Engineers, inspired by possibilities the project demonstrated, commented that, “Engineers tend to take the quickest, cheapest route to solving a problem and don’t worry too much about creativity. Virtually any public-works project could be examined for potential arts and habitat opportunities.” We think so too.

H. Audubon Park

Audubon Park Drive SE and SE 25th Place

Upper Lake Sammamish Plateau, WA

This attractive pond is a fully functional water quality facility. It meets the 1990 King County Surface Water Design Manual requirements for water quality ponds, with some modifications allowed by variance. Instead of three cells, the pond appears single-celled. Actually, a submerged wall performs some of the same functions as would the traditional berms, but without the visual impact, and with more efficient use of space. The pond was also deepened from the standard design to add dead storage volume and to allow the recirculating fountain to

A fantastic grotto is located at the trail halfway point.



Banks are heavily planted with natives.





Combination water quality pond and fresh visual amenity forms the heart of Audubon Park.



Open space is a backdrop for the entire development.

operate without stirring up bottom sediment.

In the foreground, the relatively gentle slopes of the maintenance access road provide easy and safe pedestrian access to the water. Neighborhood kids frequently stop to skip rocks or to launch argosies into the wake of the fountain. Visually, the pond leads the eye toward the open vistas beyond created by a biofiltration swale and large infiltration area, framed on either side by gentle, planted slopes. The well proportioned setting, punctuated by the quiet splashing of

the fountain, make this pond an asset for the nearby sales office, and a focal point for the community.

Issaquah Highlands

Located at the end of Black Nugget Road

Upper Lake Sammamish Plateau, WA

This model planned community was designed under King County “Four to One” program, which devotes 4 acres of open space for every acre of development, to create higher, urban-like residential densities

along the urban-rural boundary. Issaquah Highlands is designed with a new paradigm which seeks to combine single-family and multifamily housing, retail and commercial development in one place, more like the older Seattle neighborhoods than a stereotypical suburban development. Mixing up architectural styles, zoning, cost and size of houses will make for a more diverse – and representative – neighborhood. It is called an “urban village” and is designed to bring neighbors closer together – literally – with smaller lots,

front porches, public gathering places and amenities within walking or biking distance.

One of the amenities is the stormwater storage system which has been used to create park-like open space between clusters of houses as well as to provide trails for walking and running. The ponds are large enough (at capacity) to resemble waterfront. The Highlands is successfully re-inventing both neighborhoods and stormwater pond amenities based on proven models.

An overview of Issaquah Highlands shows how ponds are an integral part of the community.



Plantings and walking trails will surround ponds.



Ponds are large enough to double as waterfront.



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⁴ Ibid. Pg. 149

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PUBLIC AND PRIVATE PARTICIPANTS MUST HAVE
BOTH THE VISION AND THE WILLINGNESS
TO WORK IN CONCERT TO CREATE STATE-OF-THE-ART
POND DESIGNS THAT PROTECT THE ENVIRONMENT,
BENEFIT THE INVESTOR, AND PROVIDE
NEEDED AMENITIES FOR COMMUNITIES.

