

AGENDA
JENSEN-OLSON ARBORETUM ADVISORY BOARD
Valley Library
Wednesday, February 21st, 2018
5:15 P.M.

- I. Call to Order**
- II. Approval of Agenda**
- III. Public Participation on Non-Agenda Items**
- IV. Approval of Minutes**
 - A. Wednesday, November 8th, 2017
- V. New Business**
 - A. M54 Toilets at Arboretum
 - B. 2017 Annual Report
- VI. Unfinished Business**
 - A. CBJ Finance Report on Endowment in Juneau Community Foundation
 - B. Arboretum Rental Money
 - C. Commercial Use Update
- VII. Committee, Liaison, and/or Staff Reports**
 - A. Chair Report – E. Buyarski
 - B. Manager Report – M. Jensen
 - C. Friends of JOA Report – P. Harris
 - D. Other Business
- VIII. Adjournment**

Next JOAB Meeting: Wednesday, May 9th, 2018 at 5:15 Mendenhall Library

DRAFT MINUTES
JENSEN-OLSON ARBORETUM ADVISORY BOARD

Mendenhall Library, Conference Room | Wednesday, November 8th, 2017 5:15 P.M.

I. Call to Order at 5:16 by Chair, Ed Buyarski

Present: Kristin Bartlett, Ed Buyarski (t), Peter Froehlich, Kim Garnero, Patricia Harris, Nell McConahey, Deborah Rudis (t)

Absent: Shawn Eisele

Staff Present: Merrill Jensen, Arboretum Manager; Brent Fischer, FPL Superintendent; Lauren Verrelli, P&R Administrative Assistant II

II. Agenda Changes – None.

III. Public Participation on Non-Agenda Items – None.

IV. Approval of Minutes –

- A. August 9th, 2017:** P. Froehlich moves to approve the minutes, no objection. ***Minutes adopted.***

V. Unfinished Business –

A. Update on Parking Lot, Trail Design & Sunroom Construction:

M. Jensen: Construction of the parking lot is almost done. Thought they had found cultural remains. The state archaeologist came out and what they had found was an old beach, between 10,000 to 12,000 years old. The permit was also not in place so they were operating without a permit. They missed the window in the fall to get it paved so we will have to wait until April to pave. We did plant 25 new trees around the backend of the parking lot. We worked with TrailMix on the trail design from the parking lot to the Arboretum; we will do construction sometime in the spring. Two donors have funded all the material, just looking for labor funding. The trail will be around 220 feet long and will come out at the kiosk which is where we will be installing an entrance arch in memory of Alexis, Bill Ehlers daughter.

P. Froehlich: Could we have a landing that funnel people by a donation area that ends farther from the road with a view of the garden?

M. Jensen: We plan on having the trail come out with a view of the garden. We have a preconstruction meeting tomorrow for the sunroom. Contract work will be by Silver Bow Construction and they will begin December 18th. The footprint of the sunroom will stay the same.

B. CBJ Finance Report on Endowment in Juneau Community Foundation:

Moved to next meeting.

C. Arboretum Rental Money:

B. Fischer: Some of the rental money (Merrill's rent) should go into a different unrestricted account for future maintenance down the road. Currently, all of it goes into the endowment which we can't touch. This would be like a rainy day fund. There shouldn't be action tonight, need to think through the pros and cons.

K. Garnero: I will contact Bob and we will continue the discussion next meeting.

D. Commercial Use Update:

M. Jensen: Seal Trust currently is drafting it for their attorneys review. Then the City attorneys will review it. We should know more at the next meeting.

VI. New Business – None.

VII. Committee Liaison and Staff Reports

A. Chair Report: None.

B. Manager's Report: *Included in packet.*

C. Friends of JOA –

P. Harris: We had a quiet summer; our next board meeting is later this month.

VIII. Other business— None.

Adjournment – 6:24 p.m. *Having no further business before the Board.*

Next Meeting: Wednesday, February 21st, 2018 at 5:15 p.m. in the Mendenhall Library.

Respectfully submitted, Lauren Verrelli, Administrative Assistant II, 1/17/2018.

Jensen-Olson Arboretum

Manager's Report to the Advisory Board

November 8, 2017

- Produce runs to the Glory Hole (3) and Zack Gordon Youth Center (2).
- Seed collection for exchanges and researcher requests – a poor seed year with little to share.
- Mapping project – was able to work some before the semester started, on hold until spring.
- Phone difficulties – has been out twice for a total of 4 days
- Commercial Use Permit meetings with SEAL Trust. We should have our final document this winter.
- CBJ Safety Survey
- Sunroom preparations for construction - Currently scheduled to begin December 18th
- Fall garden work – vegetable garden clean up and garlic planting, fall pruning and bulb planting.
- Bear visits – Brown bear (!) came through twice with some damage, black bear in apple trees with minor damage (it fell out of the old apple tree!).
- Porcupine damage – 25 trees and shrubs damaged. It makes night visits and not able to determine feeding patterns.
- Recertified JOA USDA Small Lots of Seed Permit to allow importation of seed.
- Possible kitchen remodel project – updating 1962 cabinets and plumbing. CBJ Building Maintenance is acquiring quotes. Funding likely to come from CBJ deferred maintenance funds.
- Parking lot construction – work began on October 10 and wrapped up for the season on Oct 26th. Paving will happen in the spring as soon as the asphalt plant opens. DOT permit delay and possible archeological elements delayed work and we missed the scheduled paving window. State Archeologist confirmed not archeological elements on site. Suspect remains are ancient beach deposit. Have started working on perimeter plantings with Project Engineer approval. Have posted sign for spring 2018 opening.
- Produced all *Primula* Minutes for the Juneau Garden Club for the entire meeting season.
- New pathway from the parking lot and entry plaza work started. All siting and design have been approved by SEAL Trust and Trail Mix. Working with Trail Mix to build trail to new entry plaza. Trail construction will happen in the spring. Donations have been secured for materials. Plaza area cleared with assistance from Parks & Landscape. Work will continue through the winter as weather allows.
- Attended the annual Alaska Invasive Species conference in Anchorage. State focus is on invasive pike in Southcentral lakes and preventing spread of *Elodea*.
- Work is proceeding on the APS National Show (May '18). With the show happening the week before the annual Mother's Day Plant Sale, JOA will not be participating in the sale.

From: Deborah Rudis
To: [Lauren Verrelli](#)
Subject: Clivus Multrum M54 Trailhead
Date: Monday, February 05, 2018 11:05:52 AM
Attachments: [Clivus in American Trails.pdf](#)
[ATT00001.htm](#)
[Fortune Bay Case Study.pdf](#)
[ATT00002.htm](#)
[Planning Manual, M54 series.pdf](#)
[ATT00003.htm](#)
[System spec sheet, M54W.pdf](#)
[ATT00004.htm](#)
[System spec sheet, M54W Double - New bldg.pdf](#)
[ATT00005.htm](#)
[TrailheadFeatureReduced.pdf](#)
[ATT00006.htm](#)

Deborah Rudis
Juneau, Alaska
907.723.9981

Begin forwarded message:

From: Brian Barry <brian@clivusmultrum.com>
Date: February 5, 2018 at 7:24:53 AM AKST
To: "akwildlife@gci.net" <akwildlife@gci.net>
Subject: **Thank you for your interest in Clivus Multrum M54 Trailhead**

FYI - For budget purposes assume \$24k for a single stall unit shipped as a kit with a pine board/batten exterior, asphalt shingle roof, dry toilet and solar powered vent system. Prefabrication, custom exterior finishes and foam toilets can drive the cost over \$30k. The double stall unit is basically twice the cost of a single. You can purchase just the compost tank and floor for about \$11k.

Please confirm your receipt and call/email with any questions!

Hello Deborah,

Thank you for your interest in the Clivus Multrum M54 Trailhead. Attached, please find a variety of materials that are designed to help you better understand this product and begin to plan for a Clivus system.

The M54 is unique. It offers a cost effective, odorless alternative to vault toilets, pit latrines and portable restrooms. Designed for use in remote areas, the Trailhead requires minimal maintenance and can handle over 20,000 visits annually. And because the compost tank serves as the foundation for the ADA compliant building, installation can be completed in a day without significant site work.

Clivus Multrum systems eliminate polluting sewage, save water, and require less land for operation than conventional septic tank/leach field systems. Less

expensive than traditional disposal in many situations, Clivus Multrum toilets are designed to handle both intermittent use and the high volume of peak periods. They are odorless in operation and yield safe, stable end products that are fully reusable.

Satisfied Clivus Multrum customers include local, state, and national parks, camps, golf courses, ski areas, nature centers, and highway rest areas. Thousands of Clivus Multrum systems are in use across North America, from the trails of the Grand Canyon to the beaches of Nova Scotia. Our clients include the National Park Service, the U. S. Army Corps of Engineers, the National Forest Service, the Bureau of Land Management, and state and local parks across the nation.

Please give us a call at 800-425-4887 to further discuss the details of planning for Clivus Multrum systems. And be sure to check out our website at www.clivusmultrum.com for new articles, case studies, and more. I look forward to speaking with you.

Best,

Brian Barry
Account Executive
Clivus Multrum, Inc.
800-425-4887
www.clivusmultrum.com



Model M54W

Specification Sheet

NSF Certification

The Clivus Model M54W is certified by the National Sanitation Foundation under Standard 41 (day-use, park).

Capacity

M54W VOLUME

Solids storage capacity: 81 cubic feet; 604 US gallons

Liquid storage capacity: 40 cubic feet; 300 US gallons

Daily capacity at average temp. >65°F: 60 visits
Annual capacity at average temp. >65°F: 22,000 visits

Specifications and Materials

DIMENSIONS

Pre-fabricated Shipping Dimensions (2 pcs):

Base: Length: 118"; Width: 65"; Height: 48"

Building: Length: 122"; Width: 85.5"; Height: 114"

Kit Shipping Dimensions:

Length: 122"; Width: 85.5"; Height: 112"

Pre-fabricated Shipping Weight:

Base: 1,000 lbs, Building: 1,400 lbs

Kit Shipping Weight: 2,400 lbs

Assembled Building Dimensions:

Outside Length: 122"; Width: 66"; Height: 114"

Building Enclosure (inside)

Inside Length: 82"; Inside Width: 61"

Composter Base

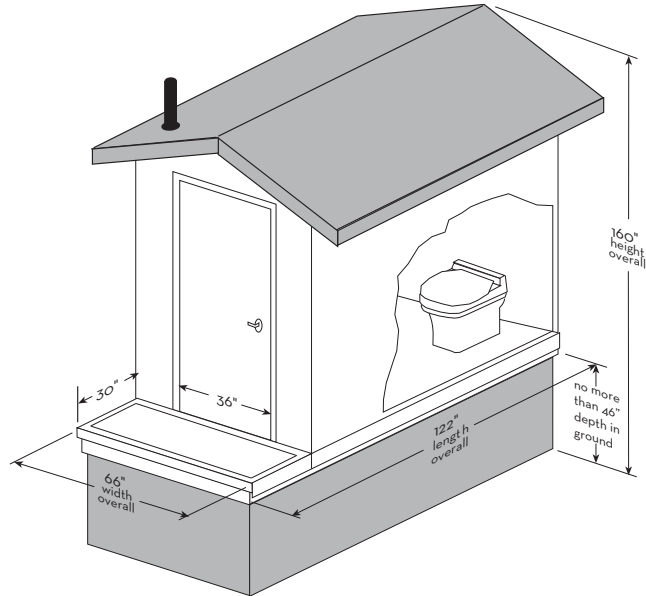
Length: 118"; Width: 65"; Height: 48"

MATERIALS

Composter Base

Composter Base is rotationally molded high-density linear polyethylene resin that conforms with the following specifications:

- Density (ASTM TEST 4883): 0.942 g/cm³
- Tensile Strength at Yield (ASTM D638): 2,950 psi
- Dart Impact (-40°C, 250 mils thickness): 108 ft-lbs
- Env. Stress Crack Resistance, 100% Igepal (D1693): 550 hrs



Building

Building walls are six structural insulated panels (SIP) with expanded polystyrene core with fiberglass reinforced plastic over OSB interior finish and OSB exterior surface finished with 1" rough-sawn pine board-and-batten (other exterior finishes optional). Door is 24 gauge cold rolled steel with zinc coating, factory painted medium gloss white, foamed-in-place polyurethane core; steel hinges; adjustable strike; frame milled from 5/4 kiln-dried pine; door opening: 36" x 80". Fixed window is 36" x 24" frosted lexan. Standard exterior is board and batten and custom painted.

Roof is two structural insulated panels (SIP) of 4" virgin expanded polystyrene faced with white fiberglass reinforced panels inside and OSB plywood outside for application of asphalt shingles or other finish.

Floor is expanded polystyrene core with 7/16" plywood underside with painted .016 aluminum skin and 7/16" plywood top surface with .08" non-skid rubber coating surface.

Standard package ships pre-fabricated. Kit form is an option.

VENTILATION

DC: 12V fan. Maximum free air is 100 cfm. Power input is 5 watts. CSA & UL approved. DC fan is powered by an optional photo-voltaic system customized for location and site requirements. Call for quotation. AC fan also available.

TOILET OPTIONS

Waterless Toilet

Constructed of impact resistant fiberglass with sanitary white finish. Seat and lid are made of plastic; the liner is rotationally molded polyethylene. The toilet must be located directly over the composter, which is situated in a space or room below. The toilet is connected with a 14" diameter straight chute.

Toilet Height: Standard: 14"; ADA Compliant: 18". Width: 18.5"; Length: 24.25".

Foam-flush Toilet

The Foam-flush toilet is constructed of vitreous ceramic. The seat and lid are made of plastic. The toilet connects to the composting unit with a 4" plastic pipe. The drain may slope up to 45 degrees from vertical. A water connection and a power connection (AC) are required.

Toilet height: Standard: 16"; ADA compliant: 17.5". Width: 15"; Length: 29".

ADA COMPLIANT

The M54W Trailhead conforms to the requirements for universal access of the Americans with Disabilities Act.



Model M54 Double Specification Sheet

NSF Certification

The Clivus Model M54 is certified by the National Sanitation Foundation under Standard 41 (day-use, park).

Capacity

The M54 Double is comprised of two M54 Composters set side by side.

VOLUME FOR EACH M54:

Solids storage capacity: 81 cubic feet; 604 US gallons

Liquid storage capacity: 40 cubic feet; 300 US gallons

Daily capacity at average temp. >65°F: 60 visits

Annual capacity at average temp. >65°F: 22,000 visits. Total annual capacity for M54 Double: 44,000 visits

Specifications and Materials

DIMENSIONS

Kit Shipping Dimensions: Length: 122"; Width: 85.5"; Height: 114"

Pre-fabricated Shipping Dimensions (2 pcs):

Base: Length: 118"; Width: 65"; Height: 48"

Building: Length: 122"; Width: 85.5"; Height: 114"

Shipping Weight: 4,800 lbs (ships in several pieces; maximum weight of any piece is 2,400 pounds)

Assembled Building Dimensions:

Outside Length: 118"; Width: 132"; Height: 110"

Building Enclosure (inside)

Inside Length: 84"; Inside Width: 61.5"

Composter Base

Length: 118"; Width: 65"; Height: 48"

MATERIALS

Composter Base

Composter Base is rotationally molded high-density linear polyethylene resin that conforms with the following specifications:

- Density (ASTM TEST 4883): 0.942 g/cm³
- Tensile Strength at Yield (ASTM D638): 2,950 psi
- Dart Impact (-40°C, 250 mils thickness): 108 ft-lbs
- Env. Stress Crack Resistance, 100% Igepal (D1693): 550 hrs

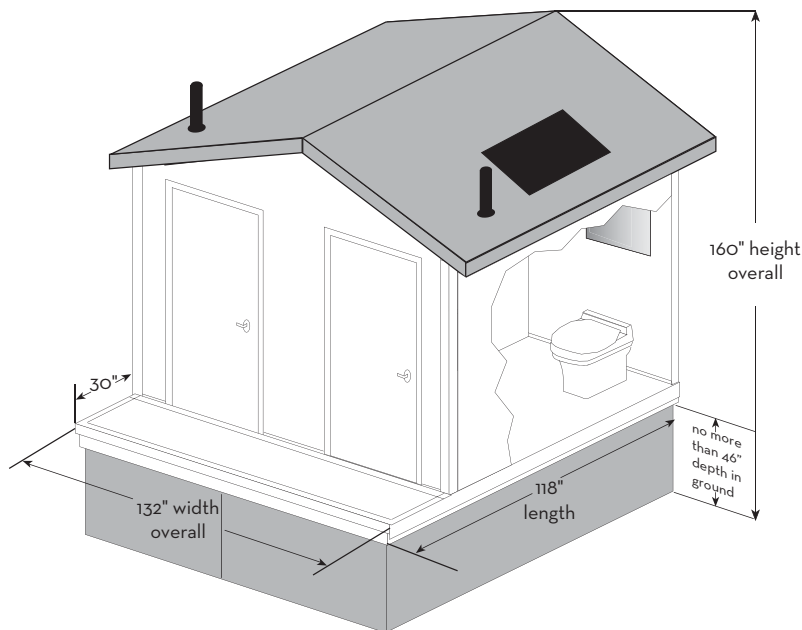
Building

Building walls are eight structural insulated panels (SIP) with expanded polystyrene core with fiberglass reinforced plastic over OSB interior finish and OSB exterior surface finished with 1" rough-sawn pine board-and-batten (other exterior finishes optional). Doors are 24 gauge cold rolled steel with zinc coating, factory painted medium gloss white, foamed-in-place polyurethane core; steel hinges; adjustable strike; frame milled from 5/4 kiln-dried pine; door opening: 36" x 80". Fixed window is 36" x 24" frosted lexan. Standard exterior is board and batten and custom painted.

Roof is two structural insulated panels (SIP) of 4" virgin expanded polystyrene faced with white fiberglass reinforced panels inside and OSB plywood outside for application of asphalt shingles or other finish.

Floor is expanded polystyrene core with 7/16" plywood underside with painted .016 aluminum skin and 7/16" plywood top surface with .08" non-skid rubber coating surface.

Standard package ships as a kit. Pre-fabrication is an option.



VENTILATION

DC: 12V fan. Maximum free air is 100 cfm. Power input is 5 watts. CSA & UL approved. DC fan is powered by an optional photo-voltaic system customized for location and site requirements. Call for quotation. AC fan also available.

TOILETS

Waterless toilets constructed of impact resistant fiberglass with sanitary white finish. Seat and lid are made of plastic; the liner is rotationally molded polyethylene. Grab bars and toilet paper holder included.

Toilet Height: 18"; Width: 18.5"; Length: 24.25"

ADA COMPLIANT

The M54 Trailhead conforms to the requirements for universal access of the Americans with Disabilities Act.

Bridges and structures for trails

Hosted by AmericanTrails.org

Trailblazing Toilets: using composting toilets on the trail

Composting toilets can provide a more comfortable environment for visitors, while conserving water and soil, and keeping wastewater from leaching into ground and surface waters.

*From the [Spring 2007 issue](#) of the **American Trails Magazine**.*

By Alex Linkow

Clivus Multrum, Inc.

These days, it's no longer enough for trail planners and crews to design and maintain first-class trails. Often, there is pressure to provide first-class restroom facilities as well. However, as you know, a variety of issues often make doing so difficult. For instance, trails in remote areas may be miles away from existing utility lines. And with no water, sewer, or electricity in the vicinity, constructing a large facility with flush toilets is often unthinkable expensive.



Composting toilet installed along a trail

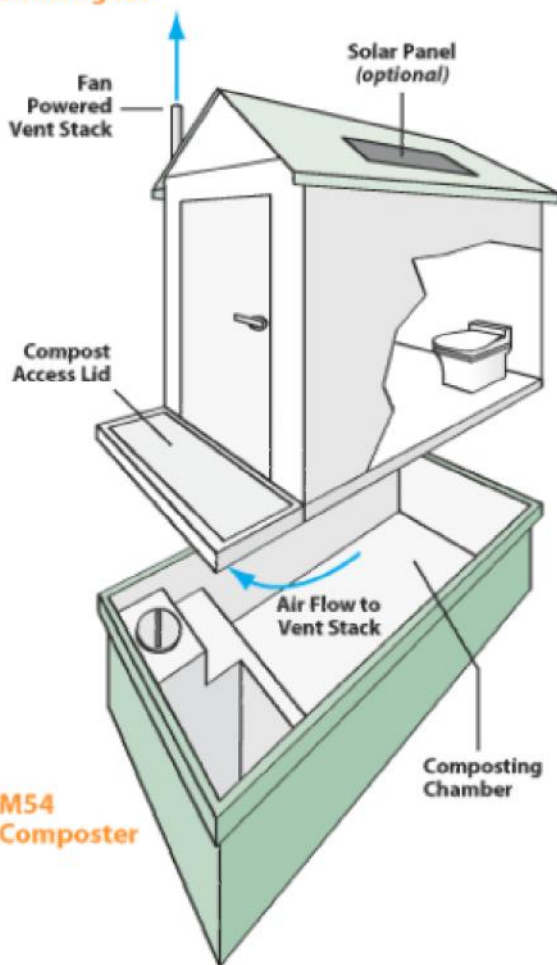
Other conventional options like portable toilets and vault systems come with concerns of their own. In addition to being unpleasant to use, these types of systems need to be emptied frequently, and in many locations, access is limited.

Todd Hafner, Director of Capital Development at Meadowlark Botanical Gardens, in Fairfax County, Virginia, recently faced these issues when he was asked to provide permanent restroom facilities on a trail in a more remote section of the Gardens. After considering the location, he realized that installing flush toilets would cost over \$100,000, far more than he had to spend. Luckily, he knew of a simple solution--composting toilet systems.

Composting toilets are a natural fit in remote areas. In addition to using little or no water for flushing, these systems recycle the nutrients in human waste to be reused as fertilizer (where local regulations allow). Instead of sending waste to a central treatment plant or leaching it into groundwater, these systems contain waste onsite and treat it through natural biological decomposition. In the composter, solids and liquids are separated by gravity.

Organisms such as bacteria and fungi break down the waste and destroy pathogens, and over time solids and liquids are transformed into safe, stable compost end-products. Liquid end-product has the nutrient value of a conventional high-potency fertilizer and is often applied to flowerbeds. Solid waste volume is reduced by over 90% during the composting process. The remaining material is a topsoil-like solid compost, which may be used as a soil amendment.

M54 Trailhead Building Kit



Composting toilet schematic drawing

The system is designed to serve campers attending a summer program at Meadowlark, as well as the Garden's regular visitors. While the summer camp program did provide the impetus to purchase the new system, the Gardens do attract some 140,000 visitors yearly. Nevertheless, up to this point, the bulk of its use came last summer, and by all accounts the Clivus performed well, as expected.

Park Manager Keith Tomlinson says it has been "phenomenally useful," noting that people are amazed that the stalls have no odor. And since the system reduces solid waste volume by over 90%, Meadowlark staff estimates that solid won't need to be removed for another 3-5 years, though it's unknown what will happen to the compost at that point. As for the liquid, the staff thinks it may end up being used to fertilize a nearby wildflower garden.



For people new to the idea, the concept of turning human waste to fertilizer can seem odd at first, but humans have actually been doing it for thousands of years. In some places in the world, it is still an important method of fertilizing agricultural crops. And in Virginia, the idea of composting toilets was not new to Meadowlark's owner, the North Virginia Regional Park Authority, when they decided to purchase one in the spring of 2006. The Park Authority already had a composting toilet at another facility, and they were comfortable with the technology.

The system Meadowlark chose was the two-stall version of the Clivus Multrum M54 Trailhead. The unit includes a bathroom building with two stalls, as well as all of the composting equipment, and a ventilation system designed to keep the bathroom odorless. The dry toilet fixtures use no water for flushing, and further water is saved by replacing hand-washing sinks with sanitary soap dispensers. The Trailhead's compact size and ease of installation provides additional benefit.

Across the country, IslandWood, an environmental learning center on Washington's Bainbridge Island, has used composting toilets on their trail system for the past 6 years. IslandWood owns a total of 255 acres of land on the island and within that area has built over 6 miles of wooded trails. IslandWood originally installed two single-stall Trailhead units on these wooded trails in the summer of 2001. In the spring of 2004, they purchased two more for the trails.

The Trailhead systems at IslandWood serve the 7000 kids and 7000 adults that visit IslandWood annually and help protect Puget Sound from the pollution that is typically caused by conventional waste treatment technologies. But composting systems are not just for remote locations. IslandWood also uses composting toilet systems in its educational studios, where people on tours of the facility are always interested in checking out the composting equipment in the basement. And according to Facilities Manager Dean Newcomb, the composting toilet systems have worked great. To aid the composting process in the remote and educational studio systems, IslandWood staff regularly adds red worms, which are harvested from an onsite vermiculture bin. As for maintenance, Newcomb says it's "straightforward and routine," even in remote locations, and to this point no material has had to be removed from the systems. That's more than can be said for the one remaining port-a-john, which Newcomb plans to replace with a composting toilet as soon as possible.

At Meadowlark, IslandWood, and locations around the country, composting toilets play a significant role in creating a more comfortable environment for visitors. And by conserving water and soil, and keeping wastewater from leaching into ground and surface waters where it can pollute drinking water and damage aquatic environments, these systems are helping to ensure that future generations of visitors will have the opportunity to enjoy the trails as much as we do.

Alex Linkow is Marketing Manager for Clivus Multrum, Inc. in Lawrence, Massachusetts. For more information call 800-425-4887 or visit www.clivusmultrum.com.



Case Study: The Wilderness Golf Course Fortune Bay Resort Casino Tower, Minnesota

Background:

The Wilderness golf course at Fortune Bay Resort Casino, in northern Minnesota, opened in May of 2004. This highly-praised championship golf course is owned by the Boise Forte Band of Chippewa and operated by Kemper Sports Management. The course's location, on the shores of Lake Vermillion, and the surrounding natural landscapes make the Wilderness one of Minnesota's most scenic golf courses. However, over the course of the design process, the natural landscape posed challenges for course planners. In order to further enhance the course's appeal and maximize convenience for the golfers, planners wanted to install mid-course restrooms at the 5th and 14th holes. At the 14th hole, site characteristics allowed for flush toilets and sinks to be connected to local utility lines, but that was not the case at the second location.

Problem:

Between the 5th hole and the nearest utility lines, there is close to a mile of bedrock. It would have been extremely expensive and hugely environmentally disruptive to run water and/or sewer lines to a restroom there. Andy Datko, Director of Planning for Fortune Bay (now CEO) was in charge of finding an alternative. He needed a restroom solution that would need no running water and little electricity but still be good-looking and pleasant to use. One idea was to use portable toilets and hide them within a larger structure. But Datko realized that no amount of concealment could disguise the odor associated with portable toilets.



Solution:

Datko knew that composting toilets were a possible solution but didn't know very much about them. A Google search led him to the Clivus Multrum web site, and ultimately, after a review of the product literature and detailed discussion of his situation with Clivus, he became convinced that this was the answer. Datko purchased the Clivus Multrum Trailhead composting toilet system in early 2002. The Trailhead unit shipped to Datko as kit. The only heavy equipment needed for installation is a small backhoe to dig a hole four feet deep for the composter. The handicapped-accessible structure is erected directly on top of the composting unit. No foundation is called for, and the entire unit can be installed in less than two days. A customized solar system powers the fan that keeps the Trailhead odorless.

(Continued on next page)

Solution (continued):

According to Datko, the Clivus was much cheaper than a flush system at that location. Datko worked with a Chippewa environmental official, Darren Steen, to describe the process and benefits of composting toilet systems for the course. The Clivus was installed at the 5th hole later that year and was first used by construction workers in early 2003. Superintendent Vince Dodge says the Wilderness course gets around 24,000 golfers per year, and he guesses that, over the course of a year, the Trailhead unit is used a couple thousand times. Dodge says golfers don't seem to pay much attention to the novelty of the composting toilet, which would likely not be the case had they used portable toilets. And Dodge describes the Clivus as a "low maintenance unit." In fact, Dodge generally takes care of the monthly maintenance himself.

Environmental Benefits:

In addition to conserving water, the Clivus system at The Wilderness produces safe, useful compost end-products. Liquid waste filters through the system and is transformed into a stable liquid end-product, with the makeup of a high-potency nitrogen fertilizer. This liquid is then separated into a storage tank and added to the course compost pile, which consists mainly of grass clippings. Although solid end-product, which closely resembles topsoil, has not yet been removed from the system, it will eventually end up in the compost pile as well. Finished compost from the pile will be added to flower beds on the course. This manner of disposal puts the nutrients in human waste back where they belong, into the soil, not into lakes, rivers, oceans and groundwater supplies, where they cause damage.

Other well-known golf courses that use composting toilets include Giants Ridge, also in northern Minnesota, and Maidstone in East Hampton, New York.



Featured Projects



New Jersey National Golf Course

Basking Ridge, New Jersey

Background

- 18 hole championship golf course located in central New Jersey
- Golf course covers 260 acres of rolling woodlands
- Serves 25,000 golfer annually
- Course received Audubon certification for commitment to high standards of environmental management

Composting Toilet Systems

- Purchased 2 Clivus Trailhead composting toilet systems in 2006
- Both units use foam-flush toilet fixtures, & both are solar-powered
- Foam-flush toilets use only 6 ounces of water for flushing
- Toilets reduce water used for flushing by over 97%
- Custom exterior finish
- Makes restrooms available at the most remote holes on the course without detracting from beauty of the course



Greater Moncton Sewerage Commission Trailheads

Moncton, New Brunswick

Background

- Greater Moncton Sewerage Commission (GMSC) created in 1983
- GMSC oversees waste treatment in Moncton, Riverview, & Dieppe
- 3 communities share a loop path along the Petitcodiac River
- 13 mile path used by local walkers, joggers, and bikers

Composting Toilet Systems

- 4 custom Trailhead Composting Toilet Systems purchased in spring of 2004
- 4 additional custom Trailheads purchased since 2004
- 8 systems spread across Moncton, Riverview, and Dieppe sections of the path
- Trailheads prevent additional waste from entering sewer
- Systems can each handle 22,000 uses annually and will create fertilizer end-products that can be used safely, onsite



1-800-4-Clivus
www.clivusmulttrum.com

To: Assembly Human Resources Committee
From: Ed Buyarski, Chair
Jensen-Olson Arboretum Advisory Board
Date: February 16, 2018
Subject: Jensen-Olson Arboretum Advisory Board 2017 Annual Report

There were and are ongoing discussions of housing rental income from 2016, 2017, and again to be discussed in 2018!

Last spring many supporters petitioned the CBJ Assembly Finance Committee regarding possible severe cuts to JOA budget. During that meeting, Committee members decided not to make those cuts in the face of strong public support for the Arboretum.

There are continuing discussions on the JOA Endowment investments.

Fall construction on the parking lot has readied it for spring paving and greater safety for JOA visitors.

Ed Buyarski
JOAAB, Chair

Attachment: 2017 Attendance Record

JENSEN-OLSON ARBORETUM ADVISORY BOARD ATTENDANCE 2017

LEGEND: **A** – Absent / **P** – Present /
P(t) Present telephonically

	2/8/17	5/9/17 <i>*Special Meeting</i>	6/14/17	8/9/17	11/8/17
Ed Buyarski, Chair Appt: 4/2007	P	P	P	P	P (t)
Kristin Bartlett Appt: 8/2015	P	A	P	A	P
Shawn Eisele Appt: 11/2014	P	A	A	P (t)	A
Peter Froehlich Appt: 4/2010	A	P	P	P	P
Kim Garnero Appt: 2/2011	P(t)	P	P	P	P
Patricia Harris Appt: 4/2007	P	P	P	P	P
Nell McConahey Vice-Chair Appt: 11/2014	P(t)	A	P	P	P
Deborah Rudis Appt: 10/2009	P	P	P(t)	P	P (t)
VACANT					

From: [Bob Bartholomew](#)
To: ["Kim and Dan"](#)
Cc: [Nell McConahey](#); [Pat Harris](#); [Allison Gillum](#); [Ed Buyarski](#); [Merrill Jensen](#); [Lauren Verrelli](#)
Subject: RE: JOA endowment
Date: Wednesday, November 22, 2017 11:07:04 AM

Hello all - I can provide update on the items Kim raised:

1. Attached is the annual report for the portfolio that contains your endowment. You can find the total balance and investment performance as of June 30, 2017.
2. I have not made much progress on researching the ability to delegate endowment investment to Community Foundation. I am assigning this project to staff in the Treasury Division and we will send up update with timeline in the next week or so.
3. Once a decision is made on how you want the rental receipts handled (e.g. what portion deposited in endowment and what portion accumulated outside of the endowment for operating/capital budget items the governance documents can be updated. If you have specific questions we can have a call to discuss them. I am available for a call or meeting except Dec. 13 through 19. Generally first thing in the morning or around 4pm each time is a good time to set up meetings or phone calls.

Bob Bartholomew

Bob Bartholomew

Director of Finance

City and Borough of Juneau

907.586.0300

-----Original Message-----

From: Kim and Dan [mailto:kimdan@gci.net]

Sent: Thursday, November 09, 2017 5:43 AM

To: Bob Bartholomew

Cc: Nell McConahey; Pat Harris; Allison Gillum; Ed Buyarski; Merrill Jensen; Lauren Verrelli

Subject: JOA endowment

Hi Bob,

The Jensen-Olson Arboretum Advisory Board met last night. We'd like to get some committee work done in the next month or two:

- 1) Get an update on the status of the endowment as of June 30, 2017.
- 2) Hear what you've learned about the option of moving the investment function to the Juneau Community Foundation. Does the CBJ Law department think it's feasible?
- 3) Develop a recommendation on the proposal below to siphon off a portion of the rental receipts in a separate account for funding repairs/upgrades to the residence.

Please let me know when a meeting to discuss these items would work for you.

Thank you,

Kim Garner

City and Borough of Juneau

Long Term Portfolio

FY17

Ownership Percentage,

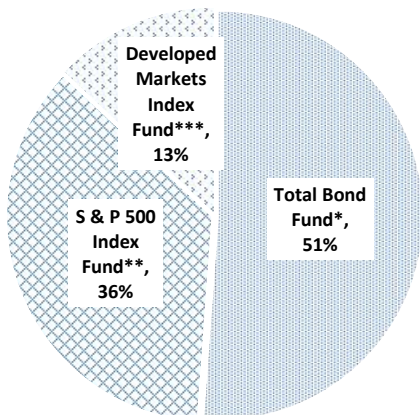
Asset Allocation

and

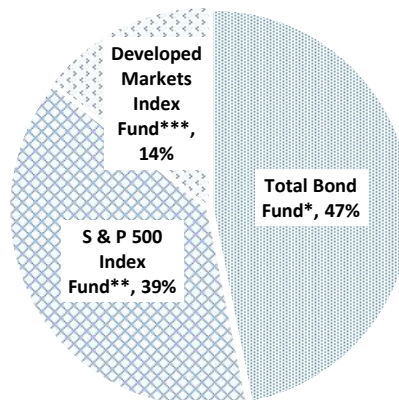
Performance

As of June 30, 2017

FY16 Long Portfolio Allocation



FY17 Long Portfolio Allocation



As of June 30, 2016

Total Bond Fund*	51%
S & P 500 Index Fund**	36%
Developed Markets Index Fund***	13%
Totals	100%

Market Value	Allocation %
2,289,089	51%
1,606,535	36%
579,827	13%
\$ 4,475,451	100%

As of June 30, 2017

Total Bond Fund*	47%
S & P 500 Index Fund**	39%
Developed Markets Index Fund***	14%
Totals	100%

Market Value	Allocation %
2,278,971	47%
1,893,342	39%
696,384	14%
\$ 4,868,698	100%

Disclosure : All funds listed below are managed by Vanguard, a leading No-Load Investment Company.

***Total Bond Fund**

This investment seeks the performance of a broad bond index. The fund invests in investment-grade corporate, US Treasury, mortgage-backed and asset-backed securities with short, intermediate and long maturities in excess of one year.

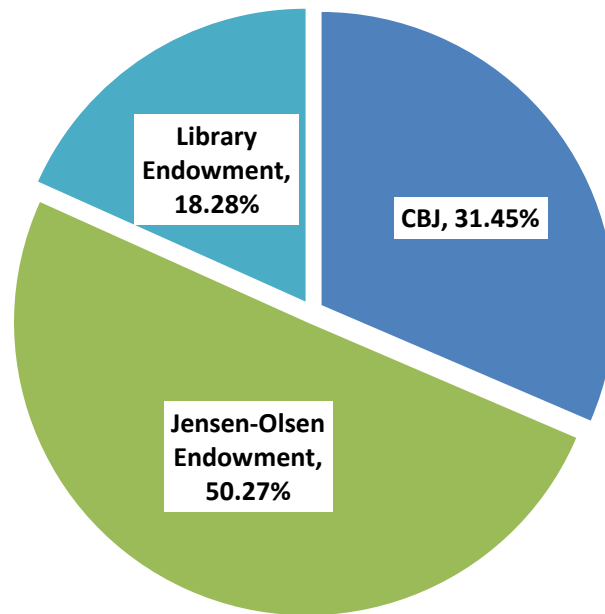
****S & P 500 Index Fund**

This investment seeks to track the performance of the S&P 500 Index, a widely recognized benchmark of U.S. stock market performance that is dominated by stocks of large U.S. companies.

*****Developed Markets Index Fund**

This investment seeks to track the performance of a FTSE Developed All Cap ex U.S. index and designed to help U.S. investors benchmark their international investments. It is comprised of large, mid and small cap stocks globally, excluding the U.S.

Percent Ownership of the Long Portfolio*



* as of June 30, 2017

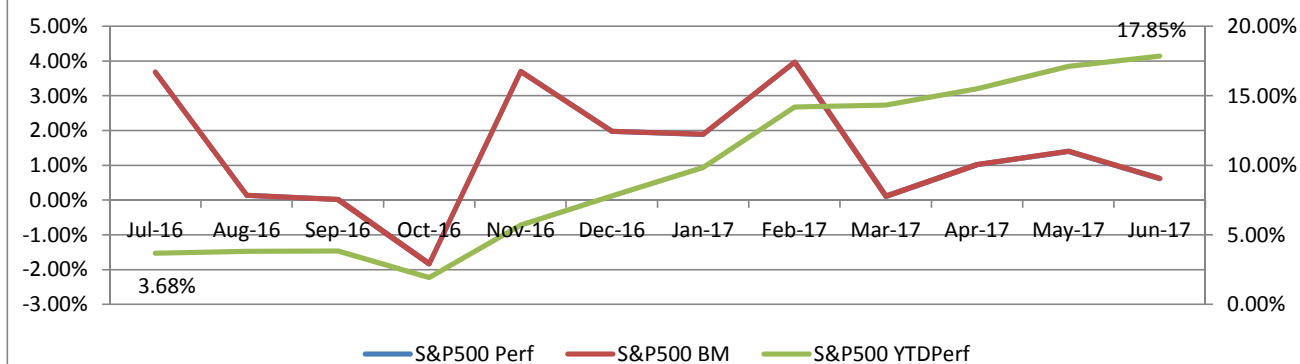
	CBJ	Jensen-Olsen Endowment	Library Endowment	Total
FY16 Market Value	\$ 1,320,393	\$ 2,337,015	\$ 818,043	\$ 4,475,451
Transfers In FY17	89,300		-	89,300
Transfers Out FY17	-		-	-
Withdrawals FY17		(89,300)		(89,300)
Adjustments FY17	-	-	-	-
Earnings FY17	121,597	199,686	71,964	393,247
FYE17 Market Value	<u>\$ 1,531,290</u>	<u>\$ 2,447,401</u>	<u>\$ 890,007</u>	<u>\$ 4,868,698</u>
% Ownership FYE17	<u>31.45%</u>	<u>50.27%</u>	<u>18.28%</u>	<u>100%</u>

CBJ is City & Borough of Juneau

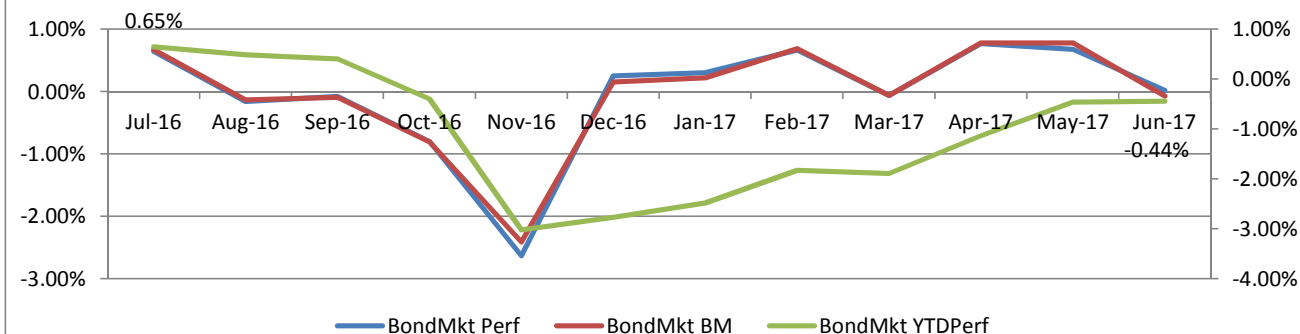
Performance View

	<u>S&P 500 Fund</u>	<u>Total Bond Market Fund</u>	<u>Developed Markets Fund</u>	<u>Total</u>
FY16 Market Value	\$ 1,606,535	\$ 2,289,089	\$ 579,826	\$ 4,475,451
Rebalancing				-
FY17 Total Income	286,807	(10,118)	116,558	393,247
FY17 Market Value	<u>\$ 1,893,342</u>	<u>\$ 2,278,971</u>	<u>\$ 696,384</u>	<u>\$ 4,868,698</u>
Total Return	<u>17.85%</u>	<u>-0.44%</u>	<u>20.10%</u>	<u>8.79%</u>

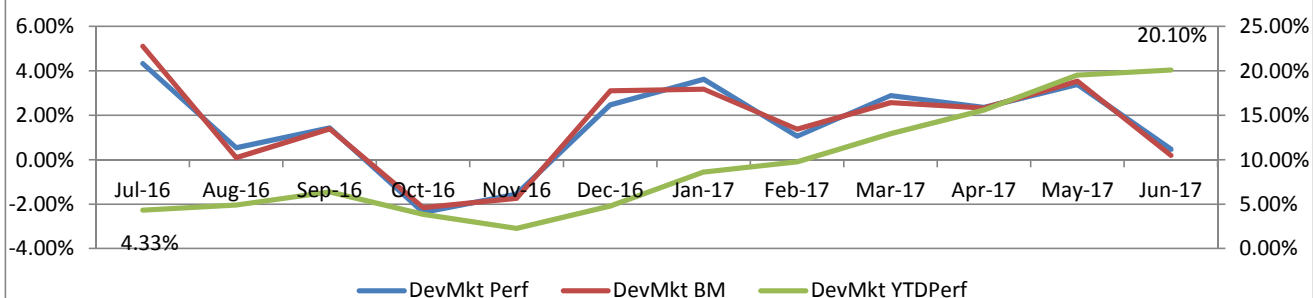
FY17 Benchmark vs S & P 500 Fund w/YTD Performance



FY17 Benchmark vs. Total Bond Market Fund w/YTD Perf



FY17 Benchmark vs. Developed Markets Fund w/YTD Perf



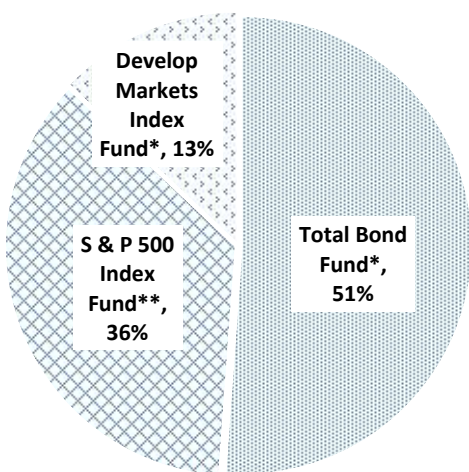
Rebalancing / Allocation Considerations

Present CBJ Investment Policy adheres to certain allocations among the various types and classes of securities. This strategy is well-known and well-followed by governmental agencies and professional portfolio managers. As of June 30, 2017 the allocation is within the ranges established by policy. There are two rebalancing options:

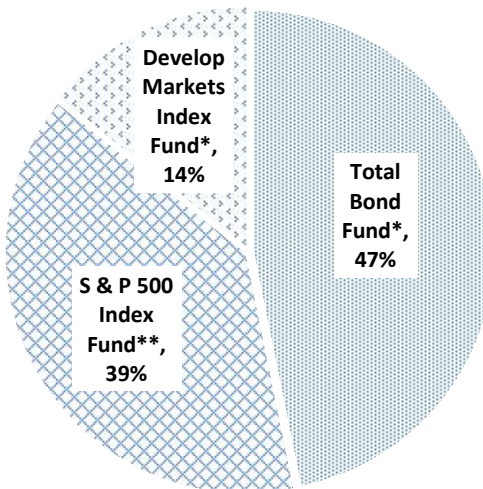
- * Leave asset allocation as is
- * Rebalance to the midpoint of the ranges - reduce US S&P 500 from 39 to 35%; increase US Total Bond from 47 to 51%

Security	Policy Range %	6/30/2016	6/30/2017
U.S.	30 - 35 - 40	36%	39%
Int'l	9 - 14 - 19	13%	14%
U.S. Bonds	46 - 51 - 56	51%	47%

FY16 Long Portfolio Allocation



FY17 Long Portfolio Allocation



Jensen-Olson Arboretum

Manager's Report to the Advisory Board

February 21, 2018

- Pre-construction meeting for the Sunroom Repair project. 11.9.17
- Sunroom construction commences 12.18.17
- New completion date 3.21.18
- Arboretum presentation to the Historical Society
- November snows – total of 26” on the ground
- Plant database work – annual backlog catch up, image importing a continued work in progress
- American Primrose Society (APS) National Show initial planning meeting
- Restroom research – have settled on pre-fab kit from Romtec (an example is at the Ernest Gruening Cabin at Amalga)
- December weather flip-flop. High temperature of 53 and lots of rain. Spring bulbs pushing out of the ground on the 18th, 37 days earlier than our previous record early emergence. Some flooding due to frozen ground, melting snow and rains.
- Winter shrub pruning
- Tulip planting delayed due to warm temperature. 700+ bulbs in pots
- FY'19-'20 budget work started in late December and wrapped up February 7th. New process is a huge improvement over previous years
- Dealt with family health issues in Oregon in January
- Memorial bench re-oiling – 2 completed and 2 more in processing
- APS show planning, venue bookings, keynote speaker logistics and program, catering, etc.
- Meeting with Trail Mix for new entry trail construction scheduling
- Dishwasher replacement – discovery of new necessary kitchen work that needs to be addressed.
- OnCell mobile app for Arboretum tour presentation – a very good idea but prohibitively expensive. \$900 up front support, we build the tour, and then \$249/month for app hosting
- Seed exchange orders and seed sowing – NARGS, SRGC, Meconopsis Group (out of Scotland), Spathe Arboretum in Germany and Carinthian Botanic Center in Austria. Scaled back seed orders this year.
- Vegetable Garden seed orders.