Water to the Promised Land

ALSO:

BOOZE, SEX, AND REALITY CHECK: IF YOU DON'T SNOOZE, YOU LOSE
BECAUSE THE WORLD NEEDS BIG IDEAS

campaign.wsu.edu/give

I am: Lisa Heard, and as of May, I am one of WSU’s most recent graduates!

I believe: That receiving scholarships means you are not alone—that others came before me and I can build off their successes. The woman who my scholarship was named for was fearless. She got through college during the Great Depression and forged a career when few women were in business. I kept her portrait on my wall for inspiration.

I will: Someday lead a major corporation. I believe I can do this. Others believe in me enough to support me, so I should believe in myself, too.

Read Lisa’s full interview: campaign.wsu.edu/impact/lisah


Big Ideas start with the next generation. Will you help shape the future?

FALL 2013

WASHINGTON STATE

magazine

FEATURES

24 :: Water to the Promised Land
As an aquifer declines, Columbia Basin farmers look to water promised them 80 years ago. by Tim Storey

32 :: Booze, Sex, and Reality Check
Student drinking may always be with us, but behavior modification could make it less risky. by Hannelore Sudermann

40 :: If You Don’t Snooze, You Lose
Chances are, you do not get enough sleep. And that could be dangerous. by Eric Sorensen

PANORAMAS

8 The tractor beam has arrived :: 9 Stronger may not be better
10 A fitting business :: 11 An even playing field :: 12 From Holland
Library to hacking history :: 19 Dynamic duo :: 21 Apple-a-Day
22 A Cougar trade show

DEPARTMENTS

3 FIRST WORDS :: 6 POSTS :: 7 WHAT’S NEW? :: 13 SHORT SUBJECT:
Constant coffee :: 14 SPORTS: Composing Cougar soccer :: 15 Cougar
Crow Days :: 16 IN SEASON: Washington’s sweet
rug secret :: 46 CLASS NOTES :: 50 IN MEMORIAM :: 55 NEW
MEDIA :: Inside Back Cover LAST WORDS

TRACKING

47 Kathleen McChesney ’71—Agent of change :: 49 Jennifer Merschdorf ’96—
A young survivor :: 50 Eugene Rosa 1942-2013—Working for people and
the planet :: 52 Charles Argersinger 1951-2013—Equilibrium
54 Alumni News: Ten years of teamwork

TOMORROW BEGINS HERE.

Guess who 150,000 aviation industry leaders turned to at the Paris Air Show to learn about innovative ways to create sustainable aviation biofuels?

cleantech.wsu.edu

In the early 1950s, Washington State College and the Bureau of Reclamation published a Farmer’s Handbook for the Columbia Basin Project. Written for new farmers breaking ground in the newly irrigated Columbia Basin Project, the handbook offered advice on everything from what crops to grow to what kind of windbreak to plant so the soil doesn’t blow away.

The manual advised on how to site the new homestead with the prevailing wind in mind and explained the irrigable land classification defined by the Bureau of Reclamation and how water allotments are figured. With proper financial credit (also explained) and another extension bulletin or two, the new farmer should be able to create a life for himself and his family on the newly watered Columbia Basin.

Indeed, what is striking about this helpful book is its pioneering implication. Without water, much of the Columbia Basin was merely desert to be crossed on the way to somewhere greener. Only with water did it become “the planned promised land.” The farmers to whom the manual was directed were the last pioneers, and the Columbia Basin was the last unconquered realm of the American frontier.

The land made fertile by the Columbia Basin Project was originally intended for poor farmers displaced by the Dust Bowl. But such best laid plans were disrupted by World War II and subsequent social and economic shifts. The Grand Coulee Dam, long dreamed of by local visionaries, would back up the Columbia River to provide water and power to irrigate an intended 1,027,000 acres. But the war effort required huge amounts of electricity to power aluminum plants and the Hanford nuclear facility, so its original purpose was delayed long enough for socioeconomic realities to change.

Irrigation water did not start flowing until well after the war was over, and for the most part, the displaced farmers from elsewhere never showed up. Bulletin 566 of the State College of Washington’s Agricultural Experiment Stations, The Columbia Basin Settler: A Study of Social and Economic Resources in New Land Settlement, revealed quite different settler profiles than originally anticipated.

By the mid-1950s, 53 percent of the Columbia Basin settlers had come from Washington itself. Another 28 percent were from Oregon, Idaho, and Montana. Also, the newly settled farmers were, at least given the original intentions, relatively well-to-do: “The median value of assets was $17,800, and the net worth, $14,000.”

Although the authors concluded that there seemed to be plenty of settlers to occupy the newly available farms, they also worried that, given a further drop in farm prices (or a “new Depression”), the future might see a shortage of qualified settlers.

Clearly, they need not have fretted. Though the Columbia Basin Project has not yet been completed, the effect of existing irrigation on the economy of central Washington has been enormous. Even if the specifics are different from the original intent, one need only glance occasionally from side to side on a drive along State Route 26 between the scablands and the Columbia to understand the effects of public works.

On an altogether different note, we welcome the return of Nature Boy’s “Mini-Me.” The four-foot-tall model for the more familiar 30-foot-tall, 25-ton sculpture on the side of Holland Library that we know as Nature Boy (more correctly, “The Reader”) had been residing at the Cathedral of St. John the Divine in Spokane for the past 63 years. But now he is home (see “Last Words”).

Tim Steury, Editor

WSM Fall 2013
Three Great Ways to Belong to One Great Organization

Membership has doubled! That’s right, there are now over twice as many members of the WSU Alumni Association (WSUAA) than there were just a few short years ago. They joined to support student scholarships, take advantage of all the incredible member benefits, connect with other Cougs, and show their Cougar Pride.

We extend our thanks to all the alumni, students, friends, faculty, Coug parents, and staff whose membership has helped the WSUAA claim its rightful place among the finest and fastest-growing alumni associations in the country. We salute our Annual, Life, and Platinum Life Members.

Platinum Life Membership

Platinum Life Membership is one of the new ways to belong to the WSUAA that we announced last year. It was suggested by and created for Cougs who want to help the WSUAA do even more for WSU. To date, the response has been incredible. Platinum Life Membership is one of the new ways to belong to alumni associations in the country. We salute our Annual, Life, and Platinum Life Members.

Platinum Life Membership is one of the new ways to belong to the WSUAA that we announced last year. It was suggested by and created for Cougs who want to help the WSUAA do even more for WSU. To date, the response has been incredible. Platinum Life Membership is one of the new ways to belong to alumni associations in the country. We salute our Annual, Life, and Platinum Life Members.

If you have not yet joined, or you are a current member interested in Life Members, plus additional recognition and a growing suite of benefits, connect with other Cougs, and show your Cougar Pride.

For information about advertising in Washington State Magazine, go to wsm.wsu.edu/advertising or contact Larry Clerk at 509-335-2388.

ADVERTISING

For information about advertising in Washington State Magazine, go to wsm.wsu.edu/advertising or contact Larry Clerk at 509-335-2388.

The green building trend at WSU

Discovered at the Center for Regenerative Environmental Systems (CREST) on the WSUMPI campus, this building is the first in the Pacific Northwest to have a LEED Silver rating.

One of the most exciting aspects of the building’s design is its green roof, which is made from recycled rubber tires and has a number of benefits. First, it reduces the amount of heat retained by the building, which helps to keep the interior cool in the summer and warm in the winter. Additionally, the green roof provides a natural habitat for birds and butterflies, and it helps to reduce stormwater runoff.

Another unique feature of the building is its living wall, which is made from a mixture of rocks, soil, and plants. This wall provides natural insulation for the building, reduces the amount of energy required for heating and cooling, and improves indoor air quality.

The building also features a number of other sustainable design elements, such as a rainwater harvesting system, which captures stormwater and uses it to flush toilets and other indoor plumbing. Additionally, the building is designed to maximize natural light, which helps to reduce the amount of energy required for artificial lighting.

In conclusion, the green building trend at WSU is an exciting development that demonstrates the university’s commitment to sustainability and environmental responsibility. By embracing green building practices, WSU is helping to create a healthier and more sustainable future for all.
The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver

The story behind the sign

The Johnsons have a long

“We're having my daughter

And “everybody” isn't that

I'll let you know my opinion of

Photos courtesy WSU Vancouver
The tractor beam has arrived

Capt. James T. Kirk: You left spacially without a tractor beam?
Capt. John Harriman: It doesn’t arrive until Tuesday.
—from Star Trek: Generations

by Eric Sorensen

IN THE DAYLIGHT, A BRIGHTLY LIT LAB, THICK WITH SCIENTIFIC EQUIPMENT, HARRAMORECS PROCESS A SMALL POLYSTYRENE SPHERE THE SIZE OF A 1-CENT COIN.

“Here’s what happens,” says David Grier, a New York University physicist working with small objects and similarly small forces.

He has pondered this for another four years or so when researchers in Hong Kong moved his spherical objects toward the light source.

If a lot of sound was being scattered back from an object, it would be pushed forward, he reasoned. If no sound was scattered back, there was some chance the object could be pulled toward the source.

Hildenbrand and Nevins are just tossing lobs.

“Never mind. It’s kind of an exciting time for the lab, and hopefully we can continue to do cool things,” Nevins said. “There’s a lot of awesome stuff that goes on down here that people don’t ever hear about.”

Their first test subject? Hildenbrand’s son Kaden, an avid soccer player at Pullman Middle School. “I had mixed emotions when my mom told me she’d be shooting a soccer ball out of a cannon at my head,” he says.

“Stronger may not be better by Adam Lewis 13

A pack of seventh grade soccer players huddles around a make-shift batting cage inside WSU’s Sports Science Laboratory one Friday last March. One by one, they step inside the black netting to stand under bright lights and high-speed cameras.

“They’re interested in tracking biological cells or small objects you would like to assemble in some controlled way,” he says.

An air-pressure canned shoots a soccer ball 30 feet across the cage and the 13-year-old tries to head the ball back in the direction from which it came.

The purpose of such madness? Hildenbrand, associate professor in the College of Education, is exploring the role the neck plays in the incidence of concussions.

So the professor and Sports Science Laboratory research project manager Derek Nevins teamed up to examine more closely the role the neck plays by studying each player accompanied by the development of flexibility and a greater range of motion, says Hildenbrand.

“Thats translation of research out of the lab and into the field or the clinic [is their current challenge],” she says. “It’s always been a question of how you facilitate that, because there are a lot of amazing things that happen in laboratories that either don’t make it to the clinic for lack of interest or publicity or they don’t make it for lack of planning.”

Watch a video of the soccer cannon in action at wsm.wsu.edu/extra/soccer-concussion.

The current theory hasn’t been especially effective. Hildenbrand says recent reports suggest between more than 1.8 and 3.6 million heading a lobbed soccer ball back at the machine. They fitted each kid with tracking stickers and headbands to measure the force of impact when the ball makes contact with the forehead.

The current theory is that neck strengthening—a practice preached by football trainers across the country—must be
A fitting business

by Hannelore Saderman — Growing up, Loralyn Young ’62 heard different versions of her grandmother’s story. She was a Pennsylvania-born girl from a large family and for some time was apprenticed to a tailor. She married a homesteader more than 30 years her senior, and was widowed in Kansas with a young child at the age of 35. She later married Civil War veteran John Stevenson and started her second life. Then they moved to Washington state, where, at the age of 60, Lucy opened her own hat and dressmaking business in Issaquah. From some accounts, she was drowsy and dozing off. From others, precise and demanding.

“My uncle told me one time that she ruled with an iron fist,” says Young, raising her hand. “No smoking in the house. Do things your way.”

In a lifetime of family letters, Lucy Stevenson comes across as strong-willed and independent. From Young’s mother, she had more of a picture of a slow and caring grandmother who doted on her baby granddaughter. “In her aging years, my mother would say ‘Oh, I miss my granddaughter,’” she says.

But Grandma Lucy was also a tempting mystery. “When I was growing up, I loved a lot with my grandmother (Lucy’s daughter Willa),” says Young. “I would sneak upstairs and explore. Finding crates and trunks, little Lorainy simply had to pry open the lids and peek inside. ‘I remember finding beautiful light lavender silk from a dress and lots of feathers, egret feathers, long beautiful white, and long black ones.’ She also found embroidered fruit, cherries and berries, black bird wings, and ‘all kinds of wonderful stuff.’” But the explorations would come to a quick end when her grandmother would miss her and call her back downstairs.

As the years passed, the trunks moved to Young’s mother’s home and then to her own. Besides letters, papers, and family tokens, there were the materials, the ribbons, buttons, the needlepoint, and the lace that seemed too precious to just throw away. Young wondered, “What to do?” One day, she found the answer in a Washington State Magazine story about Washington State University’s costume and textile collection.

Young’s mother’s story and fashion and history at the turn of the last century. “But when it showed up on campus, I was really excited,” says Bradley. The artifacts included a century-old German thread cabinet, a gilded petit point, a sewing rocking chair, and goods for building hats. “Items that can provide a scenario of what life had been like,” says Bradley.

It was a feast of fresh material for Bradley’s students, who were enrolled in a costume management course last spring.

When Stevenson moved here in 1894, Washington state itself “was pretty rough and tumble at that point,” says Bradley. She sent student Abby Conley to do more research over winter break. Issaquah, the town where the Stevensons settled, was called Calum at the time. Its residents farmed, cut timber, and worked as coal miners. “It was interesting to take a look at where she [Lucy Stevenson] was in history,” says Conley. “And that she was building something in her own name.”

She had her own store, on property only in her name. Perhaps she learned something about owning property years earlier after her first husband died. She also had tailoring and bookkeeping skills to use in supporting herself and managing her money.

In the process of finding a home for Lucy’s things, Young herself learned more about her family and her community. And she provided a catalyst for WSU’s students to focus on a particular time in history. “I so much wanted the kids to recognize what an extraordinary time we had with our current time and culture. Bank failures and all,” says Young.

Last spring Bradley’s class on costume museum management blended items from Stevenson’s shop with pieces from the existing costume collection to create an exhibit exploring Lucy’s story and fashion and history at the turn of the last century.

“I was so glad they accepted it,” she says of the donation. “And that they did something with it.”

But her first time taking an exam in a computer class, she was able to finish only about 80 percent of it. Obviously, such an approach would not work.

After struggling through her first semester, Lockwood learned of the University’s Access Center. Among the many services the Access Center offers, one of the most valuable is working with faculty and instructors to accommodate students who need extra time, arranging schedules and proctors.

While still a student at WSU Lockwood was interested in costume sciences. Lockwood, who has cerebral palsy, married a Pullman resident and moved here from Latvia. Her description of life in the Former Soviet country illuminates a stark contrast.

Teachers there discouraged Lockwood’s parents from bothering to pursue further education for their daughter. She was largely confined to a third-floor apartment with no elevator. Even when she emerged, streets and sidewalks were nearly impassable for a wheelchair.

Anyone in her circumstance was almost completely dependent on family members for help—just as she was dependent on her husband her first semester at WSU. He would deliver her to class and pick her afterward. But one thing she could not do was help her take tests.

Even though her hands are crippled with cerebral palsy, she says she can take notes, if slowly and in a script only she can interpret.
This year, for the first time in about a decade, four hearing-impaired students arrived on campus, and four signed up for distance learning. The on-campus students required sign language interpreters for lectures, and the online students required transcription. All of which is very expensive, particularly for science classes.

“That’s one thing to interpret,” Psych 107 says Goodwin. “But when interpreting advanced science curricula at a medical level, it’s coffee.”

Our Story

Fifty years back: WSU in 1963 - The WSU Bowling Club: Knocking down pins since 1952

Fifty of their work is trial and error, says Goodwin, involving a “lot of conversation with faculty.”

Overall, however, says Goodwin, it doesn’t matter what the disability is. “It all impacts their learning.”

Goodwin says the center’s staff of eight are all strong proponents of self-advocacy, which is quite different from high school.

“We will help the student identify what is appropriate,” she says. But then the student has to go and identify himself or herself to their instructors and talk about what they need.

“We can be advocates of things go away, but we cannot put things in place for the student.”

Neither does the center go out and find students, she says. “They must identify to us. Our role here is access,” she says. “Of all the services provided, in the end it is up to the student.”

Of the 18 students served by the center last year, 55 percent have grade point averages above a 3.0. Goodwin interprets that figure as 55 percent who are not particularly struggling.

But for those who are, and who also work very hard, “I would love to be able to award those students scholarships,” she says wistfully.

In the case of Svetlana Lockwood, add opportunity and accommodation to an intelligence and talent that her earlier teachers did not recognize; and one result is the dissertation on higher dimension computation that she is currently writing.

In 2011, she received a National Science Foundation graduate research fellowship, which provides three years of funding. Last year she won a NSF grant that enabled her to study for seven months in Norway at the Karol Institute for Systems Neuroscience and Centre for the Biology of Memory, part of a group working to better understand neural networks in the brain.

From Holland Library to hacking history

by Eric Sorensen

Of all the ways a college student can find trouble, it’s not usually Ralph Barclay who does it. Either he’s not in the library.

It was 1980, and he was wandering through the engineering library, then on the third floor of Holland, when his eye was drawn to a technical manual of Bell System Technical Journal. Inside, amidst some positively mind-numbing treatises, he found the article, “Signaling Systems for Control of Telephone Switching.”

Years later, this one article would be referred to as “the key to the kingdom,” a plain-spoken description of how the phone system evolved and, unknowingly to the authors, the means by which an 18-year-old electrical engineering student from Soup Lake could hack into its inner workings.

“Through, ‘This is way better than using a pay phone,’” Barclay, who died in 2009, would tell his flock would dance after eating the berries from a certain bush.

In 1988. The name is a reference to a folk story about the discovery of coffee in which a goatherd noticed his flock would dance after eating the berries from a certain bush.

For Cherie’s day job and found a space to set up a storefront for Dancing Goats Espresso Company in 1998. The name is a reference to a folk story about the discovery of coffee in which a goatherd noticed his flock would dance after eating the berries from a certain bush.

Challain quickly made friends with Dick Batdorf, the owner of neighboring coffee shop Batdorf & Bronson. Batdorf had retired from Tacoma Community College and took up a second career in coffee. He was also a fine roaster from whom Challain was happy to buy beans. “He would tell these students we've done this so long, we know how to do it.”

The name is a reference to a folk story about the discovery of coffee in which a goatherd noticed his flock would dance after eating the berries from a certain bush.

Thirty years ago, Batdorf & Bronson arrived in the 1980s in the middle of the pack of Northwest coffee companies, some of which are now international names. While others have grown exponentially, even internationally, Larry Challain’s company has stayed constant—an Oregon presence, a craft roaster with carefully selected beans, and a community landmark.

From Cherie’s day job and found a space to set up a storefront for Dancing Goats Espresso Company in 1998. The name is a reference to a folk story about the discovery of coffee in which a goatherd noticed his flock would dance after eating the berries from a certain bush.

But their friendship was too brief. Just two years after Challain opened Dancing Goats, Batdorf died of a heart attack. The Challains brought his company: the blenders, the beaners, and the branding.

They kept the name Dancing Goats for a few of their storefronts and their flagship coffee blend. The Challains taught themselves how to roast, but depended on several original employees for advice and taste training. They had a good vision and resisted temptation to cut corners. “That never cost you more in the end,” says Challain.”

They focused on roasting the best coffee to highlight the qualities of the bean, whether it’s fruitiness, nuttiness, or flavors of burnt caramel, chocolate, or spice. With a solid supply of local home roasters, and dozens of cafes, the community is pretty much fueled by caffeine.

That’s just the kind of basic, nuts and bolts way of doing things that Challain and his team plan to continue. “We’re not trying to be your hippest hipster roaster,” says employee Jenica Campbell. “But we’ve done this so long, we know how to do it.”
Composing Cougar soccer

by Jason Krump '93: A music business graduate from Birmingham-Southern College, Keidane (Ke-Dawn-EE) McAlpine had designs on moving to Atlanta to work in the music industry. He soon realized his disposition and the music business were discordant. “I’m not mean enough for that,” he says with a laugh.

Fortunately, McAlpine’s time at college had created other, more harmonious, opportunities. “The doors that kept opening were the soccer doors,” says McAlpine, who is now the Washington State women’s soccer coach.

After his college playing days, BSC women’s coach, Lommie Erko-Shepherd, offered him a full-time assistant.”

“She decided to retire,” he remembers. “Next thing you know I am a head coach.”

“In 2006, he moved to Auburn as an assistant coach and helped guide the Tigers to six straight NCAA postseason appearances. “During the winter of 2012 he became the fifth head coach in the WSU program’s history,” McAlpine says. Now it’s late May 2013 and McAlpine is between recruiting trips, having just returned from London. In a couple days, he leaves for New Jersey.

McAlpine inherited a team, from former head coach Matt Potter, that advanced to NCAA postseason play three of the last four seasons, including second round appearances in 2009 and 2011.

“You know you’ve got a program you can build in because it does have a foundation already set in place,” McAlpine says. “Now you’re adding your twist and hope to continue the building process.”

Considering his music background, it’s apt that his twist is up-tempo. “I’ve always been a believer that the more you have the ball and the more opportunities you can create, the better chances you have of winning the game.”

Throughout his first season, McAlpine gradually implemented his up-tempo style, adding small pieces week to week. “A 1-0 victory over Washington in the 2012 regular season finale capped a 12-win season, and for the fourth time in five years, the Cougars earned a berth to postseason play.”

As he enters his second season, McAlpine’s challenge is to advance the Cougars to the Sweet 16, something never done before.

“Every player that we recruit, we tell them the goal is to find people who want to be the first at something. To be the first to make the Sweet 16, the first to make the Elite Eight, the first to make the Final Four, the first to win a championship, the first to do it again.”

And that’s music to Cougar fans’ ears.

National champs

The WSU women’s rugby squad won their second national championship in the last four years, beating Winona State 60-5 in May. The team, undefeated this season, has competed in the Division II nationals for the last five years. Next year, the club sport will move to Division I, with stronger competition for the Cougs. Courtesy WSU Women’s Rugby

Cougar Crew Days

In March, alumni and team members of men’s crew, the oldest sport club at WSU, gathered for Cougar Crew Days, as they do each year. But this year’s celebration had special significance: 40 years of racing competitions.

Rich Stager ’74 and Ken Abbey, vice president of business affairs, formed the crew team in 1969, built the Cougar Shell House on the Snake River, and appointed landscape architecture professor Ken Struckmeyer as the first coach. The team entered its first tournament in 1973. The Cougar Crew Days included a banquet, auction, and the annual race between team members and alumni (photo above). According to Doug Engle ’01, they raised more than $10,000 for the team over the weekend. Photo courtesy Lisa Curtis ‘83
Midwesterners may scoff, but right now an abundance of sweet corn from Yakima Valley and around the Columbia Basin is heading to grocery stores, farm stands, and farmers markets from Anacortes to Zillah. It is something of a surprise that our state is also one of the largest sweet corn producers in the country.

The stuff at the farm stands is just a hint of how much of the crop is here. These states dominate in the production of sweet corn for canning and freezing. The first two are no revelation: Wisconsin and Minnesota. But some years Washington in the source of 80,000 tons of the succulent seed, nearly 200,000 tons more than Wisconsin. And last year, Washington led the nation in sweet corn production.

In Benton and Franklin Counties, "it’s a pretty important rotation crop," says WSU extension agent Tim Waters. It’s a C4 crop and as a grass it’s pretty good for breaking disease cycles in fields for typical Columbia Basin crops like potato, onion, and avocado. The C4 classification refers to the plant’s super-efficient ability to fix carbon in the right conditions: warm weather and plenty of water. Most grasses are C3.

It’s a beautiful example of farmers over centuries selecting for traits like size and yield. Then dramatic change came in the twentieth century about 12 seeds or kernels. It is descended from teosinte, a grass that heads a skinny “ear” with only one kernel. So why is it here? Irrigation is the key. Corn needs sufficient water during these critical stages: tasselling, silking, and ear fill. Without it the ear doesn’t fill out. In the Columbia Basin “when you want the water, you turn it on. When you don’t, you turn it off,” says Gay Madison ’78, who works as a consultant at 100 Circle Farms.

Nowadays growing the crop is a precise science, says Madison. “You’re basically a plant doctor, focusing on the interrelationships of the nutrients in the soil and asking questions on a daily basis,” he says. Some of those questions come through soil and tissue samples checking to see if the plant needs more nitrogen, phosphate, or zinc. “We’re asking the plant. ‘How are you feeling? Are you lacking something?’”

WASHINGON'S SWEET CORN SECRET

Washington is a quick trip (often under an hour) to the processing plant before the sweetness, tenderness, and moisture are just right. From there it’s boiling water. “The longer you wait from picking to eating affects the flavor a bit.”

Besides the big-scale processing farms, there are small farms growing corn around the state. Last spring Ken Christianson ’74 and his son Eric ’12, a graduate student at WSU Mount Vernon, planted two fields of hybrid sweet corn on their small Skagit Valley farm.

The father and son put just over an acre of yellow supersweet corn and about a quarter acre of white supersweet. When it’s ready for harvest in late August and early September, they plan to stock their roadside stand with the corn.

So why is it here? Irrigation is the key. Corn needs sufficient water during these critical stages: tasselling, silking, and ear fill. Without it the ear doesn’t fill out. In the Columbia Basin “when you want the water, you turn it on. When you don’t, you turn it off,” says Gay Madison ’78, who works as a consultant at 100 Circle Farms.

Nowadays growing the crop is a precise science, says Madison. “You’re basically a plant doctor, focusing on the interrelationships of the nutrients in the soil and asking questions on a daily basis,” he says. Some of those questions come through soil and tissue samples checking to see if the plant needs more nitrogen, phosphate, or zinc. “We’re asking the plant. ‘How are you feeling? Are you lacking something?’”

ONE OF THE BEAUTIES of farming corn in the Columbia Basin is that it can be used in double cropping systems, so the farmers can harvest two different crops from the same field in a single year, says Waters. First they plant a pea crop in February and by June are ready to harvest and follow it with corn, which ripens from June to October. Since peas fix nitrogen, and corn requires it, it’s a perfect pairing.

The corn is planted right on the heels of the pea harvest, says Madison. While the combines are rolling through the fields picking up the peas, the planters are sometimes right behind them putting down the corn. At 100 Circle Farms, Madison grows corn, peas, and other crops in irrigated circles. The corn harvest itself happens quickly, with a team of combines working a field to fit it in the optimal window during which the sweetness, tenderness, and moisture are just right. From there it’s a quick trip (often under an hour) to the processing plant before the rapid change of sugar sweet to starch. “When everyone else goes to bed, they’re running 24/7,” says Madison.

HARVEST IN THE BASIN

A few years ago they bought their neighbor’s place, where sweet corn has been grown and sold locally for over 20 years. “We decided to carry on the tradition,” says Ken Christianson, who owns a tree nursery and before that worked in the vegetable seed business. He loves growing plants from seed.

The father and son put just over an acre of yellow supersweet corn and about a quarter acre of white supersweet. When it’s ready for harvest in late August and early September, they plan to stock their roadside stand with the corn.

“I think the Skagit is a great place for sweet corn roadside production,” says Christianson. The ample water and days in late summer when the temperature is in the mid-80s provide the Christiansons and their neighbors the right conditions for a delicious crop. For timing, they can’t compete with the early cropping possible in Eastern Washington, says Christianson, but “the quality of local grown is worth the wait.”

Of the corn, try corn in soup or salsa. For a few of our favorite corn recipes, visit wsm.wsu.edu/recipes/corn-recipes.
Panoramas

Lapsley writes that Barclay figured this out by gleaning several insights from the journal. The first, and perhaps biggest, was that a 2,600 Hz tone on the telephone line set a re- 
mute switch. The journal, now shelved on the 
top floor of the Owen Science and Engineering 
Library, has the number “2,600” underlined, in 
pen, possibly by Barclay, or possibly by one of 
the legions who sought out the article in its 
value.

Within weeks of reading the journal article, 
Barclay put together a nine-volt battery, a 
rotary dial, and a single transistor oscillator 
circuit that could make the 2,600 Hz 
tone. It worked, but inconsistently, as AT&T, also 
known as Ma Bell, was converting to a 
system in which phone calls were represented 
by multiple frequencies, not the single 
frequencies of Barclay’s first creation. Over the 
coming months, he built a more sophisticated 
box that included a touch pad he made from 
a mechanical bushing adding machine. He 

The fun ended with the summer, when he 
was arrested and charged with bookmaking, 
possibly because a friend who often used the 
phreaking days were over.

His widow, Trudy Dainorden, says he went 
to work on a prosperous career with a video 
and broadcast technology firm, as well as a 
company he launched himself.

In 2008 Brandon and Linton entered 
their proposed sustainable housing development 
known as Green Ridge, in Washington State 
University’s inaugural Imagine Tomorrow 
competition. The competition brings 
students together in interdisciplinary teams to 
address energy challenges through technology, 
behavior, design, or biofuels. The judges for 
Imagine Tomorrow are faculty and 
industry professionals.

“We read Imagine Tomorrow’s mission statement about looking toward a future in 
which we’re not at odds with our environment 
but we’re participating and recreating it. We 
were interested in how that could translate into 
design,” says Linton.

The pair took first prize and split a 
$5,000 award.

The year Brandon and Linton won 
WSU researchers received a National Science 
Foundation grant to develop another 
integrated design and sustainability project. 
Mike Wikloft, director of the Institute for 
Sustainable Design and professor in civil 
and environmental engineering spearheaded 
the grant that created the Integrated 
Design Experience (IDX) course at WSU. 

The senior design class focuses on solving 
real-world problems with the help of 
students from different disciplines. Each year a different 
industry partner presents a challenge and 
students work in teams to design solutions. 
“Big part of what IDX is doing is creating 
an energy literate workforce. The students 
who take this course will bring an integrative, 
sustainable approach to their industries,” says Wikloft.

That course brought Linton and Brandon 
back together. Linton had enrolled at WSU 
and Brandon at University of Idaho. However, 
Imagine Tomorrow had given them a take on design competitions, so even though they lived 
on separate campuses the pair met weekly 
throughout their freshman year to collaborate. 
By spring semester they had a faculty mentor 
helping them with a design, and Brandon 
was arrested and charged with bookmaking, 
at WSU every Friday. “I began to get a feel 
for the AT&T network and the Corporate 
spirit. Then I started talking to Mike Wikloft about IDX,” says Brandon. He decided to transfer.

“Eric and Nick have a friendship that 
sparks to what we do in IDX,” says Wikloft.

Ultimately, problems are not dictated by one 
professor so it takes the diversity of people’s 
backgrounds to make real solutions.”

The IDX studio in the Engineering 
Laboratory feels like the creative office of a 

Students work around tables that run 
down the middle of the long,

house it in a metal box that happened to be painted 
blue.

From then on, this device would be called 
the “blue box,” with its status elevated by the 
1971 Esquire article, “Secrets of the Little Blue 
Box.” Steve Wozniak and Steve Jobs built and 

Apple Computer. As far as anyone knows, 
1971 article, “Secrets of the Little Blue 
painted blue.

The pair took first prize and split a 
$5,000 award.

The year Brandon and Linton won 
WSU researchers received a National Science 
Foundation grant to develop another 
integrated design and sustainability project. 
Mike Wikloft, director of the Institute for 
Sustainable Design and professor in civil 
and environmental engineering spearheaded 
the grant that created the Integrated 
Design Experience (IDX) course at WSU. 

The senior design class focuses on solving 
real-world problems with the help of 
students from different disciplines. Each year a different 
industry partner presents a challenge and 
students work in teams to design solutions. 
“A big part of what IDX is doing is creating 
an energy literate workforce. The students 
who take this course will bring an integrative, 
sustainable approach to their industries,” says Wikloft.

That course brought Linton and Brandon 
back together. Linton had enrolled at WSU 
and Brandon at University of Idaho. However, 
Imagine Tomorrow had given them a take on design competitions, so even though they lived 
on separate campuses the pair met weekly 
throughout their freshman year to collaborate. 
By spring semester they had a faculty mentor 
helping them with a design, and Brandon 
was arrested and charged with bookmaking, 
at WSU every Friday. “I began to get a feel 
for the AT&T network and the Corporate 
spirit. Then I started talking to Mike Wikloft about IDX,” says Brandon. He decided to transfer.

“Eric and Nick have a friendship that 
sparks to what we do in IDX,” says Wikloft.

Ultimately, problems are not dictated by one 
professor so it takes the diversity of people’s 
backgrounds to make real solutions.”

The IDX studio in the Engineering 
Laboratory feels like the creative office of a 

Students work around tables that run 
down the middle of the long,

house it in a metal box that happened to be painted 
blue.

From then on, this device would be called 
the “blue box,” with its status elevated by the 
1971 Esquire article, “Secrets of the Little Blue 
Box.” Steve Wozniak and Steve Jobs built and 

Apple Computer. As far as anyone knows, 
1971 article, “Secrets of the Little Blue 
painted blue.

The pair took first prize and split a 
$5,000 award.

The year Brandon and Linton won 
WSU researchers received a National Science 
Foundation grant to develop another 
integrated design and sustainability project. 
Mike Wikloft, director of the Institute for 
Sustainable Design and professor in civil 
and environmental engineering spearheaded 
the grant that created the Integrated 
Design Experience (IDX) course at WSU. 

The senior design class focuses on solving 
real-world problems with the help of 
students from different disciplines. Each year a different 
industry partner presents a challenge and 
students work in teams to design solutions. 
“A big part of what IDX is doing is creating 
an energy literate workforce. The students 
who take this course will bring an integrative, 
sustainable approach to their industries,” says Wikloft.

That course brought Linton and Brandon 
back together. Linton had enrolled at WSU 
and Brandon at University of Idaho. However, 
Imagine Tomorrow had given them a take on design competitions, so even though they lived 
on separate campuses the pair met weekly 
throughout their freshman year to collaborate. 
By spring semester they had a faculty mentor 
helping them with a design, and Brandon 
was arrested and charged with bookmaking, 
at WSU every Friday. “I began to get a feel 
for the AT&T network and the Corporate 
spirit. Then I started talking to Mike Wikloft about IDX,” says Brandon. He decided to transfer.

“Eric and Nick have a friendship that 
sparks to what we do in IDX,” says Wikloft.

Ultimately, problems are not dictated by one 
professor so it takes the diversity of people’s 
backgrounds to make real solutions.”

The IDX studio in the Engineering 
Laboratory feels like the creative office of a 

Students work around tables that run 
down the middle of the long,

house it in a metal box that happened to be painted 
blue.

From then on, this device would be called 
the “blue box,” with its status elevated by the 
1971 Esquire article, “Secrets of the Little Blue 
Box.” Steve Wozniak and Steve Jobs built and 

Apple Computer. As far as anyone knows, 
1971 article, “Secrets of the Little Blue 
painted blue.

The pair took first prize and split a 
$5,000 award.

The year Brandon and Linton won 
WSU researchers received a National Science 
Foundation grant to develop another 
integrated design and sustainability project. 
Mike Wikloft, director of the Institute for 
Sustainable Design and professor in civil 
and environmental engineering spearheaded 
the grant that created the Integrated 
Design Experience (IDX) course at WSU. 

The senior design class focuses on solving 
real-world problems with the help of 
students from different disciplines. Each year a different 
industry partner presents a challenge and 
students work in teams to design solutions. 
“A big part of what IDX is doing is creating 
an energy literate workforce. The students 
who take this course will bring an integrative, 
sustainable approach to their industries,” says Wikloft.

That course brought Linton and Brandon 
back together. Linton had enrolled at WSU 
and Brandon at University of Idaho. However, 
Imagine Tomorrow had given them a take on design competitions, so even though they lived 
on separate campuses the pair met weekly 
throughout their freshman year to collaborate. 
By spring semester they had a faculty mentor 
helping them with a design, and Brandon 
was arrested and charged with bookmaking, 
at WSU every Friday. “I began to get a feel 
for the AT&T network and the Corporate 
spirit. Then I started talking to Mike Wikloft about IDX,” says Brandon. He decided to transfer.

“Eric and Nick have a friendship that 
sparks to what we do in IDX,” says Wikloft.

Ultimately, problems are not dictated by one 
professor so it takes the diversity of people’s 
backgrounds to make real solutions.”

The IDX studio in the Engineering 
Laboratory feels like the creative office of a 

Students work around tables that run 
down the middle of the long,
Apple-a-Day
by Tim Steury
Danielle ‘12 and Megan ‘13 LaRiviere could sell iceboxes to Eskimos. Or coal to Newcastle. Even apples to Yakima.

Three years ago, prompted by their insurance agent father who bemoaned the lack of good snack food, they started visiting businesses around their hometown of Yakima offering to provide them with a steady supply of apples. Subscribers get a small cooler stocked weekly with the best apple varieties available.

From the start, their Apple-a-Day service got a “pretty good response,” they say. Good enough, that is, that when it came time to return to school for fall semester, they bought a van, hired a delivery driver, and conducted their customer service from Pullman.

After three summers of building Apple-a-Day, they expanded into the Tri-Cities. Then, when it came time for Megan to graduate, they got to thinking, says Megan: “If it works where apples are everywhere, it’s probably going to work where people are a lot more health-conscious and have a lot more money.”

So Danielle and a friend, Lexi Schmidt ‘12, who had joined the venture, moved to Bellevue and started building a clientele there. Clients now range from professional offices with four employees to Puget Sound Energy’s headquarters, with coolers in many locations.

Danielle and Lexi pick up their apples on Monday at the Peterson Fruit warehouse in Mukilteo, then spend the rest of the week making sales and deliveries and appearing at networking events. They do no advertising, relying on word of mouth, cold calls, and their ever-present Apple-a-Day uniforms, red polos and jackets.

Megan was an entrepreneurship major and entered their business plan in an annual business plan competition sponsored by WSU and the University of Washington. She and Danielle, a Spanish major and business minor, won the award for “most passionate.”

Once they pass 70 clients on the east side of the west side, they plan to move into Seattle.


Remember the time what’s-his-face was guarding that guy on that other team? And that one guy took that shot — was it a two- or three-pointer? And boom! He drained it and the crowd went wild.

I’ll never forget that!

Go Cougs!
Go Cougs!
Go . . . recycling!
Go . . . recycling!

Eric Brandon ‘12 (left) and Nick Linton ‘13 worked together on architecture and engineering projects through college. Now both are starting their careers with summer internships in Seattle. Photo Matt Hagen

Danielle LaRiviere ’12 and Lexi Schmidt ’12 deliver apples to clients in Bellevue while Danielle’s sister Megan ’13 manages the Yakima and Tri-Cities end of Apple-a-Day. Photo Matt Hagen

Remember the time what’s-his-face was guarding that guy on that other team? And that one guy took that shot — was it a two- or three-pointer? And boom! He drained it and the crowd went wild.

I’ll never forget that!

Forgetting important details about the things you love? Sign up for MyLowe’s at Lowes.com. It remembers what your home needs, even when you don’t.

we scan
MyLowe’s remembers
your life gets easier

E-CYCLE
WASHINGTON
ecyclewashington.org

FREE RECYCLING

©2012 Lowe’s Companies, Inc. All rights reserved. Lowe’s, the gable design, MyLowes™ and Never Stop Improving are trademarks of LF, LLC.

©2012 Lowe’s Companies, Inc. All rights reserved. Lowe’s, the gable design, MyLowes™ and Never Stop Improving are trademarks of LF, LLC.
A Cougar trade show

by Hannelore Sudermann :: A stroll through the grand ballroom at Bellevue’s Hyatt hotel one weeknight last spring took visitors into something that was part business networking event, part WSU Cougar reunion. The occasion, a CougsFirst! trade show, offered a chance to see and sample from an assortment of about 40 WSU alumni-owned businesses.

It was also a time to catch up with old friends. Gary Wood ’79, sat at a table lined with beers and flyers for his business Great Artisan Beverage Company, a craft and specialty beer wholesaler. As Wood set up his samples, he explained that after school and a few jobs, he found his calling one day when he “followed a beer truck into a warehouse,” he said. “It was a Cougar dream come true.”

Bruce Titus ’79, a WSU classmate and owner of Bruce Titus Automotive Group, wandered over to say hello. “There’s a whole bunch of us here who went to school together,” he said, pointing out several other classmates in the room.

Registration for the 40 booths filled up quickly, among them Cougar quarterback Drew Bledsoe’s Doubleback Winery, the Visit Seattle marketing organization, and the Great Alaska Adventure Lodge.

It was a mix of new startups and established landmarks. One aisle featured DJ Darin Hanson ’01 at one end and BJ Duft’s ’86 Herban Feast Catering at the other. The catering booth offered small cracker cones filled with a tangy mousse made of Cougar Gold cheese. There were also tech firms and the Tacoma Rainiers, a shipping business, and a Coug-owned law firm specializing in defending DUI cases.

More than 500 people attended, and Brian Quint ’77, the owner of Aqua Quip, a Renton-based business selling swimming pools, hot tubs, and barbeques, was thrilled. “It’s so great to be able to come to this event and meet other Cougs,” he says. Being a business in western Washington, and having gone to Washington State University, “there’s a special connection, even if you were there 10 years before I was or 20 years after.”
LAST SUMMER as we stood in the middle of Brad Bailie’s onion fields just north of Connell, the discussion, as discussions seem to do in the Columbia Basin, turned to water.

Bailie ’95 pumps irrigation water from a well drilled down 800 feet. Neighbors have pushed wells down to 2,000 feet. At such depths, the water is often laden with salts and minerals. After a while of irrigating with this water, a crust can form over the soil surface. Farmers must use a variety of means to break up the crust, including acid, so the irrigation water can soak in.

Since he farms organically, Bailie is limited in what he can use to break up that mineral crust. He also expresses discomfort with mining the ancient water.

Indeed, after years of continuous pumping throughout what is called the Odessa Aquifer, water levels have dropped precipitously. In some areas of the aquifer, water levels have been dropping about 10 feet a year.

Not only is irrigation threatened, so too are the municipal water supplies of 20 towns throughout the region, including Connell, just to the south of Bailie’s onion fields.

Bailie nods toward the horizon. That’s the end of the East Low Canal over there, he says. A tantalizing few miles away, the East Low looks to many of the area’s farmers the only promise of continuing their irrigated livelihoods.

Short of reverting to dryland farming, farmers across what is termed the Odessa Subarea of the Columbia Basin Project are counting on the federal promise, rooted in FDR’s New Deal 80 years distant, to someday complete the project’s full potential.

Now the Bureau of Reclamation, the federal agency responsible for managing water across the western United States, and for building the Grand Coulee Dam and the Columbia Basin Project, has announced its plan to partially expand the project, for a price of $11,800 per irrigated acre and a total cost of more than $800 million.
THE COLUMBIA BASIN PROJECT is a network of canals, ditches, reservoirs, laterals, wasteways, and ditches designed to carry water from the Columbia River to irrigate more than a million acres of the Columbia Basin. Built over a period from before 1946 until after 1966, the project was, as Paul Pitzer points out in his excellent Grand Coulee: Harnessing a Dream (WSU Press, 1994), “an accomplishment larger in size, more complicated in engineering, and more costly than Grand Coulee Dam, the project’s key feature.

It works as a whole to get just how big the Columbia Basin Project is. Engineers and observers, from the river’s sources, as I am on an April day, with maps and figures and a personal tour of a sihonal fraction of the project, the largest irrigation project in the United States challenges the imagination as much as the vastness of the Columbia Basin landscape itself.

After 18 years as manager of the East Columbia Basin Irrigation District, one of three districts responsible for managing the Columbia Basin Project’s water, my guide, Craig Simpson, ’80, continues to marvel not only at the geographic scale of the project, but also at the capability and genius of the people who conceived it and built it in a spirit of engineering eg — when I came here, it was a good job,” he says. But as he learned the specifics of a system designed to deliver water to more than a million acres, the marvel of this engineering phenomenon came in “These engineers had their acts together,” he says.

Crossing the East Low Canal, just outside of Othello, and just north of Brad Bailie’s onion fields, where one of the project’s main arteries nears the end of its 87-mile delivery of water, gives little hint of the project’s magnitude, even if you know that the irrigation sprinklers visible from State Route 26 are pumping water diverted from the Columbia River 50 miles to the north and directed through miles of canal and pipeline. The East Low begins its delivery with a capacity of 4,500 cubic feet per second. By the time it reaches State Route 26, it has already delivered 4,200 acre feet of water to a land rich in soil but poor in rainfall. An acre foot is the amount of water it takes to cover an acre one foot deep, about 326,000 gallons.

Columbia Basin water becomes Columbia Basin Project water when, with six 65,000-horsepower and six 67,000-horsepower pumps powered by generator turbines in the Grand Coulee Dam, it is pumped 2,500 feet up from Lake Roosevelt to Banks Lake, the holding, or “equalizing” reservoir. Banks Lake was created by damming both the north and south ends of the 27-mile-long Grand Coulee, which was formed by ancient floods. Banks Lake has a capacity of 210,000 acre feet.

From Dry Falls Dam, at the south end of Banks Lake, the water flows into the Main Canal and then into the Wenatchee and East Low canals. Approximately, Columbia Basin Project water flows through 300 miles of main canals, 2,000 miles of lateral canals, and 3,500 miles of drains and wasteways. As large as it is, though, the Columbia Basin Project was never finished. A combination of higher than expected costs and the withdrawal of farmers on its eastern edge put its completion on hold for the last 60 years.

Altogether, surface water has been supplied to about half of the intended 1,020,000 acres promised in the original plan. Farmers in the Odessa Subarea, which is included in the project but never received surface water, were eventually given temporary permits to pump from deep wells.

Now, as a proposed antidote to the declining Odessa aquifer caused by that “temporary” deep-well pumping, the Bureau of Reclamation is proposing to extend the project’s reach.

The project toward reaching a decision on pursuing such a project is obviously long and tortuous. But after numerous studies, reports, and environmental impact statements, in April, the week before my visit with Simpson, the Bureau of Reclamation released its long-anticipated “Record of Decision.”

The 25-page statement, the bureau announced, is a choice of “Modified Partial-Replacement Action Alternative 4A. If developed, Alternative 4A would provide Columbia Basin Project surface water to 70,000 acres of Odessa Subarea land currently being irrigated from deep-well groundwater.

Once water is provided, these wells would be placed on standby status.

The proposal includes extending the East Low Canal south of 340 and adding second barrows to five existing siphons. It would also create a pressurized pipeline system to deliver water to fields. This would include pumping plants, approximately 150 miles of buried pipeline, various monitoring stations, and 15 miles of electric transmission lines.

Reasons given for selecting Alternative 4A include the most benefits to the area with the least impact on other environmental resources. Also, at the estimated cost of $11.8 billion, a project of Alternative 4A is cheaper.

This was Progressiveism at its boldest. The Grand Coulee Dam would back and divert the Columbia River to irrigate a rich land lacking only water and provide small farms to farmers displaced by the Dust Bowl, populating it with small but vibrant planned communities. The beneficiary of the project would be the small farmer. Indeed, farmers would be limited to 160 acres.

Even though the original idea has faded, perhaps the culmination of the original idea was realized in “Farm-in-a-Day” in 1952. To mark the first delivery of water to the Columbia Basin Project, promoters determined to build and plant an 80-acre farm near Moses Lake, complete with irrigation, of course, and give it to the most deserving veteran of either World War II or the Korean War. He and his family would be given a fully functional farm, created in a 24-hour period.

Donald Dunn, a veteran of World War II and a dryland farmer from Kansas, was chosen through a search by the Veterans of Foreign Wars. In the spring of 1952, 70 pieces of heavy equipment and 34 tractors leveled, tilled, and planted the land. Crowns began building the house and outbuildings.

At 4:30 that afternoon, Bureau of Reclamation commissioner Michael Straus opened a valve to begin irrigating one of the farm’s fields. “Here this afternoon we see the addition of the equivalent of a new state to the union,” he told the gathered crowd, alluding to the fact that the Columbia Basin Project was comparable in size to Connecticut or Rhode Island.

Within two years, however, Dunn, unable to secure loans or otherwise make a living on 80 acres, sold the farm and moved back to the Midwest.

As Paul Pitzer points out in an article for the Pacific Northwest Quarterly (January 1983), Dunn was not alone in his failures. “Of 725 units sold by the government from 1952 through 1956, 16 percent changed ownership during that period; another 106 parcels went unsold.”

Increasingly, farmers rented additional land or consolidated land by registering it under the names of other family members. In 1982, the Reclamation Reform Act legalized that consolidation by allowing each project owner 560 acres.

About the same time as the Farm-in-a-Day was being built, Orman Johnson’s father started growing potatoes near Othello, though his Washington roots are much older. His grandfather Reaugh graduated from Washington State Agricultural College in 1906 and wrote his senior paper on irrigation, then helped develop irrigation around Chelan.

His family’s farm, originally from Sweden, moved to Washington from California the same year he moved into Washington. With his brother Gavin and nephew Nick, Johnson, ’80 Farms 6,000 acres, irrigating from deep wells, just outside of Othello. The big “Go Crops” potato storage shed near Othello belongs to the Johnsons.

“We got our first well permit in 1984,” says Johnson. “The assumption was that the Columbia Basin Project would be finished in a few years.”

Under that assumption, that the wells would be temporary until the project was completed, many wells were drilled in the 1970s. And the water level started dropping, he says.

In the 1980s, the wells began to produce 20,000 gallons a minute at the beginning of the growing season and 5,500 by the end of the season. “Now,” he says, “they start out at 6,000 gallons a minute and end with some wells not producing in August or September.”

The Johnsons plantle season, crop like onions and potatoes according to how much water they think they will have left by the end of the season. Over the last decade, they have reduced the amount of onions and potatoes they grow simply because they don’t have enough water left by the end of the season.

wsm.wsu.edu
In addition, says Johnson, echoing Bailey, “The deeper you go, the poorer quality the water is.”

“The farmers’ wells are 2,200 feet deep, and they are pumping from 900 feet.”

“In spite of the shortage, “We’ve decided not to drill deeper.”

“My dad was on the irrigation board in the ’50s and ’60s,” says Johnson, who himself is currently on the board of the East Columbia Basin Irrigation District. “He thought we were going to have expansion, but it was not going to happen.”

“The situation is getting scary,” he continues. “We’re losing production every year, which affects all the industries. If a number of these farms went dry, processors would have to find their crops from some other acres.”

He also questions how water is valued in the bureau’s analyses. In an earlier review, bureau economists valued water at $21,000 an acre.

“The average difference in eastern Washington between irrigated land and dry land value is around $4,000,” says Yoder. “The value of a gallon of water rental rates and market prices reflect the value of water for production, so [the bureau analysis] is overstating the value by about $17,000.”

Norm Whittlesey and Walt Butcher, professors emeriti of agricultural economics, have a long history of questioning the value of expanding the Columbia Basin Project. In general they base their criticism on the fact that in order for a project to be justified, bureau rules dictate that it must show a benefit/cost ratio of at least 1.0.

Although the Columbia Basin Project was officially authorized in 1935, its development was interrupted by World War II. The Grand Coulee Dam provided an opportunistic source of the massive amounts of electricity necessary for two key parts of the war effort: the aluminum industry, essential for production of airplanes, and Hanford, where plutonium was produced for one of the two bombs dropped on Japan.

“So it was not until the late 1940s that the dam’s original purpose, irrigation, was revisited. By the mid-1960s, the first half of the project, funded half, was essentially finished.”

Toward the late 1970s, Washington’s powerful senators, Henry “Scoop” Jackson and Warren Magnuson, “greased the skids” for federal funding for the second half of the project. However, both the Carter and Reagan administrations insisted on the state’s contributing to the project, and Carter actually tried to kill the project altogether.

In the early 1980s, the Washington legislature gave Whittlesey a grant to study the benefits and costs, assuming that the results would come out highly in favor of more irrigation. With no reason to think otherwise, Whittlesey designed a study, involving a number of colleagues both at WSU and the University of Idaho.

“So the state was basically scared of losing the money that would allow the federal money to be spent on expanding the project. Approval depended on the passing of the House version.”

“To make a long story short,” says Whittlesey, “I presented my side of the story to the House budget committee.”

Whittlesey finished his testimony about 8:00 that evening and rushed to catch a plane, fully believing that his testimony had been ignored. After all, the house already had the funding written into its budget.

“A lot of the budget, however, the chair of the House budget committee called him the next morning to tell him that the House had killed the funding out of its budget.”

The sponsor was immediately. The federal government announced it could not fund the project without state participation, and proponents of the project had already agitated to have him fired.

“It wasn’t just me,” he says, “I always made sure we had peer review... Unfortunately, I had tenure.”

“Most of what I did around here,” he insists, “was favorable to agriculture.”

Indeed, Whittlesey, who retired in 1996, enjoyed a long productive career in agricultural economics, with many accolades.

It just happened that his concentration was water, a most troublesome subject indeed.

Whittlesey’s critique of the current proposal is no less withering than his testimony in 1984. But this time, it’s been effectively ignored. Which has him exasperated.

“They’re not going to get federal money,” he says, “the state doesn’t have the money and shouldn’t be funding it, and the farmers can’t afford it.”

Regarding Whittlesey’s first point, federal funding would require a GAO benefit/cost analysis that would figure in lost hydropower involved in pumping the water to Banks Lake.

“Lost hydropower will, says Whittlesey, amount to $300 million of energy cost per year per acre.”

That’s more than the net revenue coming off land, he says. “That’s another tax on you and me through utility rates. Nobody talks about that.”

The question of who would actually pay for the Columbia Basin Project was a problem from the beginning, argues Pitzer in Grand Coulee: Harvesting a Dream.

“Without the link to power and its direct subsidy,” he wrote in 1994, “plus additional subsidies from the government, such as its assumption of interest charges, the project could not exist.”

In short, when the Bureau of Reclamation figures the benefit/cost ratio at just over 1.0, Whittlesey and Butcher, once they corrected what they perceived as erroneous figures, estimate the ratio at 0.1.
Supporters of the project’s expansion, however, insist that benefits far outweigh the costs, because the costs have been overstated.

“The Bureau puts in things way too high,” argues Orman Johnson, “which is why it is difficult to get the benefit/cost ratio.”

As an example, he points to the Weber Siphon project a couple of years ago. A siphon is simply a pipe that will enable a canal to cross a lower level of land without diverting from as straight a course as possible. Although expensive, they are much less so than building a canal according to the landscape.

The Bureau’s estimate for building the siphon under Interstate 90 as $57 million, says Johnson. The bid was actually $22 million, and the cost ended up in the low thirties.

Farmers will also have the option of taking the new surface water or continuing to pump, he says. Not including all lands on the pipeline makes the ratio higher.

Simpson agrees that the costs have been overstated. Also, he strongly disagrees with Whittlesey and Butcher’s inclusion of lost power generation.

“How do you figure lost power generation when they [Bonneville Power Administration] don’t have a right to it?” he asks.

“I think this is a fairly balanced approach.”

“The economics of the Columbia Basin Project involve an intricate mix of hydroelectric power, irrigation, recreation, wildlife, navigation, conservation, agricultural surpluses, and Native American rights,” wrote Pitzer in 1994. “Furthermore, these aspects of the project do not exist in a vacuum.” Indeed, these interactions and needs have become even more complex over the last 20 years and will only increase in complexity with growing power needs, agricultural needs, and so forth. Add to this the approaching reassessment of the Columbia River Treaty between the United States and Canada, which will surely lead to changing flows and power needs. And then there is climate change and the possible effects on river flow and agriculture and many other factors.

The Water Research Center at WSU produced a report in conjunction with the Washington Department of Ecology in 2011 that assesses projected water needs in the coming decades, including effects on agriculture. One of the most interesting projections, based on computer modeling, is that the Columbia Basin will become a little wetter. As a result, director Michael Barber argues that the return of some areas, particularly in the Odessa Subarea, to dry land wheat will be far more cost effective than the $11,800 an acre price tag attached to Alternative 4A.

On the other hand, says Barber, even if we accept the high cost of taking water to the Odessa Subarea, he worries the approach is self-perpetuating, that fluctuations on Banks Lake will lead to outcries from recreational users, leading to a proposal to build another reservoir, with a price tag in the billions. Indeed, that reservoir has already appeared in alternative proposals, with no suggestion of how it might be paid for.

John Sirois, chair of the Colville Business Council in Nespelem, 20 miles north of Grand Coulee Dam, condenses tribal concerns over the project’s expansion to possible fluctuations on Lake Roosevelt and effects on cultural resources, the effect of changing flows on the tribe’s new salmon facility at Chief Joseph Dam, and the general effect on what he calls the Columbia’s “integrity.” Besides, he says with a wry smile, wouldn’t it be nice if we got some irrigation up here?

The extent of the controversy over the project’s expansion and the accompanying complexities exemplify issues regarding the future of water use and availability in Washington and throughout the West and raise many questions: What is the best use of this extraordinary resource? What is the greater good? How shall public expenditure be allocated? And who, exactly, pays?
Last August, before starting classes, before even really getting to explore campus, the 4,000-some members of the freshman class were required to take an hour-long clinic designed to improve their behaviors.

THE BOOZE, SEX, AND REALITY CHECKS program came during the Week of Welcome. Amidst the moving in, concerts, picnics, and open houses, WSU’s new students ducked into cool classrooms for versions of a seminar on drinking and sex.

“We don’t normally have firsthand interaction with students,” says Leah Hyman, a human development graduate student who broke from form to assist a WSU drug and alcohol counselor in the workshops. In a field rife with papers and surveys, Hyman was intrigued to work with the subjects directly. At the same time, it was frustrating, says Hyman. Some students made it clear that they didn’t drink at all, and didn’t plan to. Others announced they were already experienced and educated about alcohol. Many said the mandatory meeting was a waste of time.

Freshman Ashley Guarino had learned about alcohol and its effects at high school. The grounding was reinforced by her dad, who works for a beer distributor. He gave her a detailed lesson about the difference between shots and beer. “I knew pretty much everything they were saying,” she says of the workshop.

“They were trying to treat us like freshmen,” she says, then pauses. “But I guess that’s exactly what we are.”

A few students said they found it useful. “Especially women,” says Hyman. Judging by their responses, “We shocked them.” She showed them that all drinks are not created equal, that there are different sizes of shot glass and how miniscule a single shot looked in a plastic party cup.

“Where they were thinking they were only having one drink, they were actually drinking two,” she says.

National statistics show that academic failure, sexual assault, and risky sexual behavior are linked to excessive drinking. According to the National Institutes of Health, about four out of five college students drink alcohol and about half of those who drink also binge drink. Each year, more than 1,800 college students between 18 and 24 die from alcohol-related unintentional injuries.

“You want to say to these students, don’t do it. Don’t drink. You want to scare them,” says Hyman. “But we know that’s not going to work.”

Instead the trainers followed an intervention designed by Patricia Maarhuis, coordinator for WSU’s Alcohol and Drug Counseling, Assessment, and Prevention Services. Using proven science-based practices, she created a clinic to help students limit their drinking and to stay safe when they do drink.

A few students said they found it useful. “Especially women,” says Hyman. Judging by their responses, “We shocked them.” She showed them that all drinks are not created equal, that there are different sizes of shot glass and how miniscule a single shot looked in a plastic party cup.

“Where they were thinking they were only having one drink, they were actually drinking two,” she says.

National statistics show that academic failure, sexual assault, and risky sexual behavior are linked to excessive drinking. According to the National Institutes of Health, about four out of five college students drink alcohol and about half of those who drink also binge drink. Each year, more than 1,800 college students between 18 and 24 die from alcohol-related unintentional injuries.

“You want to say to these students, don’t do it. Don’t drink. You want to scare them,” says Hyman. “But we know that’s not going to work.”

Instead the trainers followed an intervention designed by Patricia Maarhuis, coordinator for WSU’s Alcohol and Drug Counseling, Assessment, and Prevention Services. Using proven science-based practices, she created a clinic to help students limit their drinking and to stay safe when they do drink.

A few students said they found it useful. “Especially women,” says Hyman. Judging by their responses, “We shocked them.” She showed them that all drinks are not created equal, that there are different sizes of shot glass and how miniscule a single shot looked in a plastic party cup.

“Where they were thinking they were only having one drink, they were actually drinking two,” she says.

National statistics show that academic failure, sexual assault, and risky sexual behavior are linked to excessive drinking. According to the National Institutes of Health, about four out of five college students drink alcohol and about half of those who drink also binge drink. Each year, more than 1,800 college students between 18 and 24 die from alcohol-related unintentional injuries.

“You want to say to these students, don’t do it. Don’t drink. You want to scare them,” says Hyman. “But we know that’s not going to work.”

Instead the trainers followed an intervention designed by Patricia Maarhuis, coordinator for WSU’s Alcohol and Drug Counseling, Assessment, and Prevention Services. Using proven science-based practices, she created a clinic to help students limit their drinking and to stay safe when they do drink.

A few students said they found it useful. “Especially women,” says Hyman. Judging by their responses, “We shocked them.” She showed them that all drinks are not created equal, that there are different sizes of shot glass and how miniscule a single shot looked in a plastic party cup.

“Where they were thinking they were only having one drink, they were actually drinking two,” she says.

National statistics show that academic failure, sexual assault, and risky sexual behavior are linked to excessive drinking. According to the National Institutes of Health, about four out of five college students drink alcohol and about half of those who drink also binge drink. Each year, more than 1,800 college students between 18 and 24 die from alcohol-related unintentional injuries.

“You want to say to these students, don’t do it. Don’t drink. You want to scare them,” says Hyman. “But we know that’s not going to work.”

Instead the trainers followed an intervention designed by Patricia Maarhuis, coordinator for WSU’s Alcohol and Drug Counseling, Assessment, and Prevention Services. Using proven science-based practices, she created a clinic to help students limit their drinking and to stay safe when they do drink.
The Booze, Sex, and Reality Checks program prompts the freshmen to think about why they drink and how it makes them feel. While first reminding them that underage drinking is illegal, the counselors urge the students to drink responsibly, to opt for beer in bottles, and to avoid mixed drinks.

“It’s funny, you have no sense of how much alcohol you’re getting,” says Hyman. “That was a恳ient statement. That’s when I saw their eyes light up.”

It may have been useful to some, says Guarno. She liked the wallet-sized BAC (Blood Alcohol Concentration) chart that shows how many hours of drinking affect a person at different drinking levels. "They approached it in an adult manner, saying there are ways to make sure you don’t get harmed and keep things in moderation," she says.

In spite of this mandatory class, last fall a number of WSU’s students suffered dangerous consequences from binge drinking. Several had to be taken to Pullman’s emergency room. In October freshman Kenneth Hummel died from acute alcohol poisoning, a heartbreaking event for his friends and classmates.

It was so disturbing,” says Gitanjali Shrestha, another graduate student who helped with the workshops. "We talked about how we could have prevented it. We wondered what else we could have done.”

Kalu left many connected with WSU—faculty, families, and alumni—wondering: Why does alcohol consumption seem to be such a problem now? And it triggered a campus-wide review of student drinking and other behaviors.

But maybe there’s evidence that the workshop did in some ways work. Shrestha, Hyman, and WSU’s behavioral scientists are evaluating whether it caused the majority of the freshmen to think about consequences to over-indulging, to be more aware of what they’re drinking, and to consider how they feel when they have had too much. They’re hoping to build on their research, application, and assessment to enhance this intervention, and take other stops to alter the drinking culture that affects not only WSU, but college campuses around the country.

“Our objective is not to eliminate drinking,” says Laura Griner Hill, professor in the Department of Human Development and associate director of health promotion and research for WSU. “It’s to minimize the harm that comes from it.”

Preventing bad things before they happen

Using tools like BAC cards, plastic cups, motivational questions, and health care surveys, the University is addressing the problems with student drinking.

The theory behind it is “prevention science,” a new field involving many disciplines and devoted to the scientific study of theory, research, and practice related to the prevention of problems. In short—it’s the science of preventing bad things before they happen. Antisocial behavior, drug and alcohol abuse, marital discord, and academic failure are just a few of the issues prevention science has addressed so far.

Last fall WSU introduced a doctoral degree in prevention science with the support of faculty from nursing, human development, kinesiology, health and wellness, education, and communication. “We are the first prevention science PhD in the world,” says Hill. In other schools it is often tied into another discipline like public health or education. The first WSU graduates, among them Hill’s students, are expected to complete their degrees in 2015.

Hill herself started graduate school with a plan to become a clinical psychologist, but she found herself drawn to this new field. “My heart was not in trying to fix a problem that existed, but in trying to prevent a problem before it occurs,” she says.

A hundred and fifty years ago our biggest health concerns were cholera and typhus, says Hill. “Now most of what kills us is tied to behaviors we can change.” Smoking, hygiene, diet, and physical activity are some of the most basic concerns. With prevention science, you can focus on the factors that lead to the development of unwanted behaviors and then by changing those factors, change the outcomes.

For example, in colleges where alcohol is not allowed to be sold on campus, drinking goes down, says Hill. Where there are higher taxes on alcohol, drinking goes down. Where there are more classes on Friday mornings, drinking goes down.

Then there are protective factors which, when introduced, can prepare someone to make a better choice when a challenge arises. Individual students often perceive that their peers are drinking more than they actually are and then drink more themselves, says Hill. By revealing the true numbers—which are almost always lower—the student may want to conform to the actual majority and as a result have healthier behaviors. They may decide to avoid drinking games, and might pace their consumption to one or fewer drinks per hour, she says.

The WSU prevention science program involves generating research-based understanding of an issue and putting that knowledge into practice in real programs for families, children, communities, and, lately, WSU undergraduates. “We’re using evidence-based approaches,” implemented by a number of different units on campus, says Hill.

With students the research focuses include drugs and alcohol, risky sexual behavior, health, and academics. “So my role on campus, in part, is to apply a public health approach using risk and protective factors,” says Hill.

In most universities the areas connected to students’ health and well-being are fragmented into separate services. “Here we have buy-in from different units on campus to pool our data and pool our resources to improve health and well-being,” says Hill. The Booze, Sex, and Reality Checks program is administered by the drug and alcohol counselors, but it is augmented with other resources by University Recreation, student life, athletics, Health and Wellness Services, the Dean of Students, and the prevention science program itself.

Often the instinct is to lecture the students about alcohol and its impact and offer cautionary tales. But that doesn’t work, says Hill. Instead, the key is to motivate the students to think more about their behaviors and
make their own decisions. Beneath it all is "self-determination theory," the idea that humans are motivated by three basic psychological needs: competence, relatedness, and autonomy. Consider the freshmen who are experiencing their first independence from their parents. They feel in control of their own decisions (competence), free from their parents’ influence (autonomy), and they connect with groups of friends (relatedness).

While it’s probably not kosher to say it, an example of relatedness in that partying with peers can enhance a student’s feelings of affiliation and strengthen his or her connection to campus, says Hill. That in turn can help make the student more likely to stay and graduate.

In many of their projects, Hill’s students make the Pullman campus their scientific focus. The populations they’re working with are the very people they walk past on Glenn Terrell Mall, stand in line with at the Todd Hall Atrium café, and even sometimes teach in their human development classes.

A few of the graduate students are exploring ways to improve the student experience, to enhance the undergraduates’ feelings of connectedness beyond partying. One is looking at how students use alcohol and strengthen his or her connection to campus, says Hill. That in turn can help make the student more likely to stay and graduate.

In the age of reason

After the alcohol-related incidents last fall, WSU President Elson S. Floyd formed a task force to look at what the University was doing to address student use of drugs and alcohol and see what new strategies could be pursued. He put Bruce Wright, psychologist and executive director of Health and Wellness Services, in charge of the group, which had representatives from around Pullman. They looked at student conduct, hospital data, and a National College Health Assessment survey where students reported on their own behaviors.

“We don’t really seem to be having more students in terms of gross numbers drinking,” says Wright, noting that WSU’s numbers aren’t markedly different than other campuses around the country. Those who binge drink seem to be the same percentage as in past years and as on other campuses. But what seems to be different is the behaviors of that small segment of higher risk drinkers. Though their number was about the same as in past years, their risky behavior seems to be growing greater.

“We were seeing extreme blood alcohol levels of 0.3, 0.4, and in one case 0.5,” says Wright.

These students may come to WSU with an underlying level of alcohol tolerance, which then allows them to consume more than their classmates, drinking to the point of poisoning, coma, or even death, he says. "We’re trying to sort out why this is happening."

Contributing factors include predrinking before events and online drinking games, he says. And there’s a shift away from beer and wine to hard liquor and to drinking more in a shorter period of time.

Then there are energy drinks, which can mask some of the symptoms of alcohol intoxication, says Wright. Where normally a drinker would pass out, the energy drink allows him or her to stay awake and drink more. This too, seems to be a problem for the high risk drinkers.

“Then I say, ‘Can we talk about that? ’” If the student responded that he has drunk to the point of passing out, says Wright, "I ask, 'OK, what do you think about that? ' Sometimes I open with 'OK, what do you like about drinking?' And then I follow up with 'Do you see any downsides to that?' Then 'Do other people in your environment see any? ’"

Understanding how to help young people develop healthy behaviors has evolved in the past 10 to 15 years. It’s not just one factor, but a variety, including age, that should be considered. “One thing we know about the brain is that it doesn’t mature completely until about the age of 25,” says Wright. The prefrontal regions of the brain, the parts that anticipate consequences for behaviors, planning ahead, and controlling impulses, are the last to fully develop.

“They’re not wired well to control their impulses,” says Hill of the students. In some instances, particularly under the influence of alcohol, “they don’t have the inhibitions that help us not make that bad choice. ’”

Understanding how to help young people develop healthy behaviors has evolved in the past 10 to 15 years. It’s not just one factor, but a variety, including age, that should be considered. “One thing we know about the brain is that it doesn’t mature completely until about the age of 25,” says Wright. The prefrontal regions of the brain, the parts that anticipate consequences for behaviors, planning ahead, and controlling impulses, are the last to fully develop.

Understanding how to help young people develop healthy behaviors has evolved in the past 10 to 15 years. It’s not just one factor, but a variety, including age, that should be considered. “One thing we know about the brain is that it doesn’t mature completely until about the age of 25,” says Wright. The prefrontal regions of the brain, the parts that anticipate consequences for behaviors, planning ahead, and controlling impulses, are the last to fully develop.

Some students may come to WSU with an underlying level of alcohol tolerance, which then allows them to consume more than their classmates, drinking to the point of poisoning, coma, or even death, he says. "We’re trying to sort out why this is happening."

Contributing factors include predrinking before events and online drinking games, he says. And there’s a shift away from beer and wine to hard liquor and to drinking more in a shorter period of time.

Then there are energy drinks, which can mask some of the symptoms of alcohol intoxication, says Wright. Where normally a drinker would pass out, the energy drink allows him or her to stay awake and drink more. This too, seems to be a problem for the high risk drinkers.

"Then I say, ‘Can we talk about that? ’” If the student responded that he has drunk to the point of passing out, says Wright, "I ask, 'OK, what do you think about that? ' Sometimes I open with 'OK, what do you like about drinking?' And then I follow up with 'Do you see any downsides to that?' Then 'Do other people in your environment see any? ’"
It’s mainly a pause and reflect,” he says of the interview. It doesn’t seem like much, but for students who may have been ambiva-

lent about their drinking behavior, just those questions can trigger healthier behaviors, he says.

The way the questions are phrased reinforces the student’s autonomy, allowing them to decide for themselves what to do.

Best of all, based on the results from other practices and studies, “We know it works,” says Hill of the brief interview. “If every student is getting that when they come in for their flu shot, then we’ve changed the culture. We’ve managed to stimulate the intrinsic motivation to more beneficial behavior.”

In place of parents

All these efforts should happen early in a student’s college career. For many freshmen that fall semester is the first time they’ve ever gone 48 hours without parental supervision. “A huge amount of what we ask students to do is suddenly become responsible,” says Melynda Huskey, dean of students. Many come from highly structured, highly supportive home environments and they aren’t offered much autonomy to make decisions for themselves. “They get here and we flip a switch,” she says. “They are suddenly independent.”

Sure, maybe they had alcohol when they were in high school, but they still had to go home, and still had to face mom and dad the next day. And this generation of parents is much more hands-on, says Huskey. “That can work against us. When you’ve had people make deci-

sions for you, when you’re away from them, you’re apt to experiment with just how far you can go.”

Yes, college is where you should experiment and explore. “But our goal is helping students stay focused on ‘What do I really want out of life?’” she says. “College is a place where that can happen.”

There’s another side to her office. When students develop prob-

lems, when they’re failing classes, have issues of conduct, are arrested, or injured, they go see the dean. “And sadly, when a student dies, our office handles that, too,” says Huskey.

Those in the prevention science program are investigating and actively trying to reduce those negative experiences. Hill and associate professor Matt Bumpus, who co-direct the Project Healthy Campus research lab, are seeking ways to a healthier campus by looking at factors such as the relationship of physical activity to student retention, the roles of peers and mentors in the freshman experience, and the importance of com-

munication between young adult children and parents.

There’s beauty to how things are fitting together, says Huskey. With their help, research and science are being put to practical use in student affairs right here on campus. “We’re doing what research-based institu-

tions are doing in all the other fields,” says Huskey. “We’re working on evidence-based protocols and evaluating their success.”

Last spring, while evaluating Booze, Sex, and Reality Checks, Hill’s students reviewed a National College Health Assessment survey of students’ health, safety, drug use, alcohol use, sexual health, and issues with academic performance. The survey asked the students whether they had five or more drinks at a sitting in the last two weeks, and how many drinks they had in how many hours the last time they socialized. After the unfortunate events of fall semester, Hill and her team were expecting to see that the drinking reported was the same or higher than the previous year. Instead, the results surprised them all. They thought they’d failed to alter behaviors, but “the data told us different,” says Sheshe. The students reported drinking less than those in previous years and the amount they thought their peers were drinking was down too. Thirty-
four percent (up from 28 percent the previous year) reported that they do not drink at all. And significantly fewer reported having suffered harm or danger related to their use of alcohol: fewer blackouts, fewer injuries, and fewer occasions of unprotected sex.

Even more remarkable was the differences between this year’s Greek system residents and those in previous years, says Hill. This year’s freshmen in fraternities and sororities were significantly less likely to binge drink or experience harm from drinking, they drank less frequently, and they were more likely to avoid drinking games.

Hill re-ran the data, then changed the variables and ran it again. Still it came out showing a significant change in behaviors from the freshmen surveyed a year earlier. Finally, here were data that the Booze, Sex, and Reality Checks program worked.

Arlingtonians of the magazine reaches mailboxes around Washington, a new group of freshmen are about to step into their own mandatory Booze, Sex, and Reality Checks. Hill and her team are also working on parent interventions. With researchers at the University of Washington, they’re developing a program to train freshmen to talk to their parents about drugs and alcohol before they even get to Pullman, encouraging the parents to explore scenarios and talk about how the student plans to respond. So far, it all seems to be working.

“We’ve had multiple years of data for comparison,” says Hill. Over the past few years, “It has been very, very consistent with regards to drinking and harm. Then this year’s data was completely different.” For now, Hill and her team are cautiously optimistic. “We’ll be much more confident about that after we do it again this summer and measure it again next year.”

Taylor Michelle Rose White ’14 is a senior studying art history and apparel and textile design.

If the student responded that he has drunk to the point of passing out, says Wright, “I ask, ‘OK, what do you think about that?’”
About an hour before sunrise on August 27, 2006, Comair Flight 5191 was approaching 120 miles per hour on its takeoff from the Blue Grass Airport in Lexington, Kentucky, when co-pilot James Polehinke noticed something strange about the runway.

“That is weird,” he said in a conversation captured by the flight recorder. “No lights.”

“Yeah,” said Capt. Jeffrey Clay.

Sixteen seconds later, their 50-seat commuter jet ran out of runway. Polehinke just managed to get airborne but not enough. The plane hit an earthen berm, clipped a fence and a clump of trees, and went down in a ball of flames.

The pilots had gone down the wrong runway, a secondary, general-aviation strip 244 feet too short for the nearly full jet’s liftoff. Forty-nine of the 50 souls perished. Only Polehinke survived.

Eleven months later, the National Transportation Safety Board ruled the crash was caused by pilot error. By a 3-2 vote, the board declined to blame the flight controller, who was busy with administrative work as the plane taxied and took off.

Greg Belenky, a research professor and director of WSU Spokane’s Sleep and Performance Research Center, has yet another suspect: fatigue.

In the previous 24 hours, the flight controller had only two hours of what he called “not real good” sleep. He was at the tail end of his fifth shift in four days.

Belenky didn’t have sleep records for the pilots, but they acted tired. They started the day boarding and powering up the wrong airplane and did an incomplete pre-flight briefing. They overlooked various clues that they were going the wrong way. Rested people tend to see a problem and look for a way around it; tired people tend to blow past the problem and persevere, redialing the wrong number, pushing the wrong button harder, or, perhaps, continuing on the wrong runway.

Using a model that weighs one’s performance against sleep cycles and circadian rhythms, Belenky estimated the air traffic controller was operating at 71 percent of his maximum effectiveness.

If You Don’t Snooze, You Lose

by Eric Sorensen :: illustration David Wheeler

If he had had more sleep and been less fatigued, Belenky testified to a U.S. Senate subcommittee in 2011, “he might have detected the error in runway choice prior to the attempted takeoff and in time to avert the disaster.”

Few of us have 50 lives at stake as the claws of fatigue tear at our minds and bodies. But it’s safe to say a lack of sleep is making us less than our full selves.

On average, Americans get six and a half hours of sleep a night, significantly less than the recommended seven to nine. Between 50 and 70 million Americans “chronically suffer from a disorder of sleep and wakefulness,” according to the Institute of Medicine of the National Academies. The institute estimates the lost productivity and mishaps of fatigue are a $150 billion-a-year drain on the economy.

The Centers for Disease Control and Prevention calls our lack of sleep “a public health epidemic.” Well over one-third of people surveyed report falling asleep at work at least once in the past month. Nearly one in twenty say they’ve nodded off while driving just as often.

Sleeping at the wheel alone accounts for an estimated 3,500 fatalities a year and 40,000 injuries. But sleep loss and fatigue exact other costs as well: increased hypertension, diabetes, obesity, depression, heart attack, and stroke, as well as the more immediate woes of broken concentration, weaker memories, and greater difficulties keeping up with hobbies, financial affairs, and work.

“Even mild sleep loss affects conscious experience and working memory,” says Belenky, who spent 29 years as a psychiatrist and sleep expert at the Walter Reed Army Institute of Research before starting the WSU sleep center in 2004.

When he arrived, the center was anchored by a $4.5 million appropriation secured by then-Congressman George Nethercutt Jr. ’67. In the last five years, the center has raised another $32 million. It now has nearly a dozen principal investigators and associated laboratories.

It is the rare soup-to-nuts operation, ranging from basic, molecular-level science to real-world simulations and policy. In one lab, James Krueger can see sleepiness triggered by the release of ATP, or adenosine triphosphate, a finding that Discover magazine listed among its “top 10

41

WSM Fall 2013
stories of 2010. “Across East Spokane Falls Boulevard, Hans Van Dongen can study the brain waves of sleeping and awake lab subjects, or juggle billions of data points pulled off truck drivers and eyes as they go through a two-week field study.”

In the Deadly Force Judgment and Decision-Making Simulator, Bryan Vika, a former Los Angeles County sheriff’s deputy, can watch a timed, split-second decision. Van Dongen knows only too well to shoot a suspect, risking a faulty rush to judgment, or wait for just a little more information, making your own demise and the lives of bystanders.

The center is guided by a principle that Belenky discovered in his earliest days of psychiatry. If you can help people with their sleep, you will risk your own demise and the lives of bystanders.

Over the next hour and 39 minutes, the team takes turns measuring, and attaching 13 electrodes to my head and collar bone. When Winner at last leads me into the dimly lit, apartment-like suite of the center’s Human Sleep and Cognition Laboratory. I sport a ponytail of fine, blue nitrile gloves. There’s Mike Winser, a research assistant, four Spokane-area college students, and Greg Belenky, director of WSU Spokane’s Sleep and Performance Research Center, busily no trouble sleeping.

Winner shows me how to snap the box to a printer cable, at which point the lab’s machinery can record some of the fundamental workings of my sleeping mind and body. Then it’s lights out.

For decades, researchers have for the most part been in the dark about the inner workings of sleep. Van Dongen, the head of the sleep lab, compares the science of sleep to astrophysics. His original field of study, just as we can’t visit deep space to look at a meteor, dying star, we can’t look directly at a sleeping human brain.

“I’ve had really advanced technologies,” he says one day in his office “but they’re all indirect measurements. There’s nothing that you can just directly observe.”

In the ‘90s, as a doctoral student in a Dutch physiology lab, Van Dongen sought to figure out what makes an early-rising morning person versus a late-rising night owl. At the time, they were considered personality traits with moral implications, the morning people being industrious and the evening people being lazy.

Van Dongen placed subjects in a “constant routine” environment in which they were kept semi-recumbent and awake and fed small meals every hour. He then monitored changes in their body temperature. Over 24 hours, one’s temperature can swing three degrees Fahrenheit, with a normal sleep period lasting 8 hours. It’s the circadian cycle, or biological clock, and it turned out that morning people were largely unaware of their mental shortcomings, suggesting that chronically sleep-deprived people might think they’re operating on all cylinders when they’re not. Their baseline of acceptable performance has shifted, says Van Dongen.

“You’re performing worse overall, but it’s stable,” he says. “That becomes the new norm. It’s similar to people who are in chronic pain. They don’t notice it anymore and it takes a pain reliever for them to recognize what it was like to be normal.”

Around the same time, work by Belenky and colleagues at the Walter Reed Army Institute of Research found that shortening a goodnight’s sleep by just 40 minutes could affect one’s performance, and as Van Dongen saw, the less sleep one got, the worse it got.

Moreover, subjects short on sleep were largely unaware of their mental shortcomings, suggesting that chronically sleep-deprived people might think they’re operating on all cylinders when they’re not. Their baseline of acceptable performance has shifted, says Van Dongen.

While at the University of Pennsylvania between 1998 and 2005, Van Dongen restricted the sleep of several dozen young adults to four, six, and eight hours a day for two weeks. Another group didn’t sleep for three days.

Those who had six hours or less reported cognitive problems as severe as those of two nights. It was as if sleep was a daily medicine with very specific dosing requirements to avoid cumulative cognitive shortcomings.

“Not the less sleep that you get,” says Van Dongen, “the worse it got, but also the more days in a row you got less sleep, the worse it got.”

Over the following week, Bender says it took me 12 minutes to get to sleep, a two-week field study.

“Even after three days of recovery sleep,” says Belenky, “with a normal sleep period lasting 8 hours, it looks super easy. Devon Grant proves to be right. Near the end of the 10-minute session, it grows exceedingly, almost painfully boring. That’s the ‘vigilance’ part of the exercise being tested. It takes a lot of effort, but hang on and keep my times low.”

That’s typical for well-rested subjects, says Grant.

“All bets are off when they’re sleep deprived,” she adds.

My eight-hour night in the lab is uneventful save for the quarter-million data points streaming from my head into the lab’s computers every second. I sleep self-consciously, and lie awake for what seems like an eternity.

“You won’t want to do it for more than 10 minutes,” she says, smiling mysteriously.

At the numbers roll and I hit buttons, the screen reports my speed, which is typically less than three-tenths of a second. I manage to hold this for 45 minutes after an early-morning bathroom break.

The following week, Winner says it took me 12 minutes to get to sleep, that I woke up 34 minutes later, and after being awake eight minutes, I had a long, deep sleep. The next morning I felt refreshed.

The next day, Van Dongen and staff researcher Heather Grant, Amy Bender, and Mike Winner in the Human Sleep and Cognition Laboratory. Photo Robert Hubner

---

I’M SURROUNDED BY PEOPLE in white coats and blue nitrile gloves. There’s Mike Winner, a research assistant, four Spokane-area college students, and Amy Bender. She’s a registered polysomnographic technologist, trained and certified in attaching wires to sleep subjects and recording and interpreting changes in their physiology as they sleep.

Over the next hour and 39 minutes, the team takes turns measuring, marking, and attaching 13 electrodes to my head and collar bone. When Winner at last leads me into the dimly lit, apartment-like suite of the center’s Human Sleep and Cognition Laboratory. I sport a ponytail of fine, colored wires that meet in a peace-like junction box. Winner shows me how to snap the box to a printer cable, at which point the lab’s machinery can record some of the fundamental workings of my sleeping mind and body. Then it’s lights out.

For decades, researchers have for the most part been in the dark about the inner workings of sleep. Van Dongen, the head of the sleep lab, compares the science of sleep to astrophysics. His original field of study, just as we can’t visit deep space to look at a meteor, dying star, we can’t look directly at a sleeping human brain.

“I’ve had really advanced technologies,” he says one day in his office “but they’re all indirect measurements. There’s nothing that you can just directly observe.”

In the ‘90s, as a doctoral student in a Dutch physiology lab, Van Dongen sought to figure out what makes an early-rising morning person versus a late-rising night owl. At the time, they were considered personality traits with moral implications, the morning people being industrious and the evening people being lazy.

Van Dongen placed subjects in a “constant routine” environment in which they were kept semi-recumbent and awake and fed small meals every hour. He then monitored changes in their body temperature. Over 24 hours, one’s temperature can swing three degrees Fahrenheit, with a normal sleep period lasting 8 hours. It’s the circadian cycle, or biological clock, and it turned out that morning people were largely unaware of their mental shortcomings, suggesting that chronically sleep-deprived people might think they’re operating on all cylinders when they’re not. Their baseline of acceptable performance has shifted, says Van Dongen.

“You’re performing worse overall, but it’s stable,” he says. “That becomes the new norm. It’s similar to people who are in chronic pain. They don’t notice it anymore and it takes a pain reliever for them to recognize what it was like to be normal.”

Around the same time, work by Belenky and colleagues at the Walter Reed Army Institute of Research found that shortening a goodnight’s sleep by just 40 minutes could affect one’s performance, and as Van Dongen saw, the less sleep one got, the worse it got.

Moreover, subjects short on sleep were largely unaware of their mental shortcomings, suggesting that chronically sleep-deprived people might think they’re operating on all cylinders when they’re not. Their baseline of acceptable performance has shifted, says Van Dongen.

While at the University of Pennsylvania between 1998 and 2005, Van Dongen restricted the sleep of several dozen young adults to four, six, and eight hours a day for two weeks. Another group didn’t sleep for three days.

Those who had six hours or less reported cognitive problems as severe as those of two nights. It was as if sleep was a daily medicine with very specific dosing requirements to avoid cumulative cognitive shortcomings.

“Not the less sleep that you get,” says Van Dongen, “the worse it got, but also the more days in a row you got less sleep, the worse it got.”

Over the following week, Bender says it took me 12 minutes to get to sleep, a two-week field study.

“Even after three days of recovery sleep,” says Belenky, “with a normal sleep period lasting 8 hours, it looks super easy. Devon Grant proves to be right. Near the end of the 10-minute session, it grows exceedingly, almost painfully boring. That’s the ‘vigilance’ part of the exercise being tested. It takes a lot of effort, but hang on and keep my times low.”

That’s typical for well-rested subjects, says Grant.

“All bets are off when they’re sleep deprived,” she adds.

My eight-hour night in the lab is uneventful save for the quarter-million data points streaming from my head into the lab’s computers every second. I sleep self-consciously, and lie awake for what seems like an eternity.

“You won’t want to do it for more than 10 minutes,” she says, smiling mysteriously.

At the numbers roll and I hit buttons, the screen reports my speed, which is typically less than three-tenths of a second. I manage to hold this for 45 minutes after an early-morning bathroom break.

The following week, Winner says it took me 12 minutes to get to sleep, that I woke up 34 minutes later, and after being awake eight minutes, I had a long, deep sleep. The next morning I felt refreshed.

The next day, Van Dongen and staff researcher Heather Grant, Amy Bender, and Mike Winner in the Human Sleep and Cognition Laboratory. Photo Robert Hubner
The man turns towards the officers, bringing the gun almost directly in line with them. Vila repeats the command, with added emphasis. “Put... the gun... down.”

The man really doesn’t want to put the gun down. He seems alert but perplexed, not angry or delusional, but he says nothing, and doesn’t add up.

Vila carefully aims at him. He’s on the edge of shooting and well in the zone of being jilted, but something doesn’t add up.

“I’m going to kill you,” he says. “If you don’t put that gun down.”

At last the man puts the gun down.

For years, Vila second-guesses himself. If the man decided to shoot, he almost surely would have gotten a round off before Vila could have processed and acted on a decision to fire in self-defense.

It turns out the man was a postal worker who was coming off a night shift and lying in bed when he heard two men breaking into his house. Threatening him with the gun, he held them against the wall of his entry and shouted for a neighbor to call the police.

Vila did not know this. What’s worse, in the tunnel vision of a deadly encounter, “he’s the one trying to side the saying, “Don’t shoot him. It’s his house. I called you.””

Vila got lucky. Now, armed with a doctorate and years of research, he wonders how the tunnel vision and adrenaline of that moment would have mixed with a serious case of fatigue. Tired people can feel threatened more readily. They’re less open to new information or solutions. They have trouble making sense of complicated sensory information, and may be more likely to act, not wait.

With state-of-the-art driving and shooting simulators, Vila is trying to get as good a view as possible of fatigue in the field.

“We don’t know anything about arousal and fatigue really to speak of,” he says. “especially in an operational environment, especially in people who are used to dealing with things when they’re tired.”

Vila voices the unsaid assumption that one never fails in combat. But even if that’s true, there’s a lot to suggest much of the brain is not as functional.

While at Walter Reed, Belenky helped with a study in which researchers did brain scans of sleep-deprived soldiers who performed a series of rapid-fire addition and subtraction problems. As the subjects stumbled 24, 48, and 72 sleepless hours, the researchers saw decreasing levels of activity in the thalamus, which controls attention and alertness, and the prefrontal cortex and the parietal association areas, which combine to make us aware of our surroundings.

This is the basis of anticipation, planning. doing things,” Belenky says. “It’s the core of the perception-action cycle and it is interfered with by sleep loss.

TWO YEARS AGO, you would have thought an epidemic of narcolepsy was sweeping across the nation’s airport control towers. Air traffic controllers were caught dozing at Seattle’s Boeing Field, at Reagan National Airport, and in Knoxville, Reno, and Miami. The head of the FAA issued a report critical of a 10-city study in which controllers were caught dozing in the control room.

The White House reportedly said it failed “the Leno test,” implying that the suggestion was too topsy for rudder on late-night television. Then Transportation Secretary Ray LaHood vowed to add an hour to the time between shifts but made no allowance for naps.

“We expect controllers to come to work rested and ready to work and take personal responsibility for safety in the control tower,” he said in a widely quoted statement. “We have zero tolerance for sleeping on the job.”

“Zero understanding,” says Belenky. “is usually the basis for zero tolerance.”

But WSU sleep researchers are seeing movement in other areas.

Van Dongen is in the middle of an extensive study that could more closely align pilot schedules with periods when they’re less likely to be fatigued. An FAA regulation in effect next year sets pilot hours by factors like how many trips they take in a day but also leaves open the possibility of a new schedule-specific rule if researchers can provide data justifying it.

“That’s the sort of enlightened rule making that we’ve been hoping for,” says Van Dongen. “And that’s starting to happen now.”

Vila talks of developing a “risk metric” with which policy makers and administrators can weigh the costs of fatigue-inducing practices like overtime. Paying time and a half is often seen as a good deal because non-payroll costs, like training and equipment, remain stable. But if the sleep lab can calibrate the added cost brought on by fatigue—crashed equipment, lost work hours, property damage, civil liabilities—it will have gone a long way in underscoring the value of a good night’s sleep, and the occasional nap.

There are times to toss a soft voice, like trying to calm a drunk down, says Vila. “But when you use the command voice, it brings you right into it and you’re focused on what you’re doing.”

The proposal did not fly. The White House reportedly said it failed “the Leno test,” implying that the suggestion was too topsy for rudder on late-night television. Then Transportation Secretary Ray LaHood vowed to add an hour to the time between shifts but made no allowance for naps.

“We expect controllers to come to work rested and ready to work and take personal responsibility for safety in the control tower,” he said in a widely quoted statement. “We have zero tolerance for sleeping on the job.”

“What is at stake when a cop is tired?” Watch a video of research in WSU’s Deadly Force simulation center at wsm.wsu.edu/extra/Naomi-James.

“This is the basis of anticipation, planning. doing things,” Belenky says. “It’s the core of the perception-action cycle and it is interfered with by sleep loss.”

Read about Naomi James, who contended with narcolepsy and period-end problems during the world, at wsm.wsu.edu/extra/Naomi-James.
Join Today.
Membership Matters.
Join Today.

Join Today.
Membership Matters.
Join Today.

Membership has doubled! That’s right, there are over twice as many members of the WSU Alumni Association (WSUAA) today than there were just a few short years ago. Why wait any longer? You should join, too.

With a ten-fold increase in the number of WSUAA member benefits, it’s no wonder why so many Cougs decided the wait was over and joined the WSUAA to make an even larger contribution to the strength of WSU. In addition, you enable WSUAA programs and services that benefit students, alumni, and the University. When you join, you instantly help fuel WSUAA programs and services that benefitted you in your Coug experience.

Why Wait?

- Special offers from Dell, Stevens Worldwide Movers, MyFlowerPark Hotel, Office Depot, Northern Quest Casino & Hotel, T-Mobile, Hotel Andra, and many others.
- Free registration of your Cougar-owned or Cougar-managed business in the Cougar Business Network (CBN).
- No membership fee when joining the Wine-By-Cougar wine club.
- Big savings on Cougar gear at The Bookie, Crimson & Gray, and the Washington State Connections store.
- Special rates on car rentals from Avis and Budget.
- $49 rate to play Palouse Ridge Golf Club in Pullman.
- Access to WSUAA Career Support Services.
- Special offers from Dell, Stevens Worldwide Movers, MyFlowerPark Hotel, Office Depot, Northern Quest Casino & Hotel, T-Mobile, Hotel Andra, and many others.
- And many more...

When you join, you instantly help fuel WSUAA programs and services that benefit students, alumni, and the University. In addition, you enable the WSUAA to make an even larger contribution to the strength of WSU. Call or join online today. We all know that Cougars are capable of doing extraordinary things, and, in true Cougar fashion, your support of the WSUAA helps WSU soar.

- 1-800-ALUM-WSU
- alumni.wsu.edu

---

Kathleen McChesney ’71

Agent of change
by Hannelore Sudermann

One day during Kathleen McChesney’s senior year, an FBI detective came to campus. Everyone was impressed with the smart looking fellow in the three-piece suit. His pitch dazzled the class. “We all wanted to apply,” says McChesney. “But then he passed out the applications. He gave one to each woman until he got to me. Then he said, ‘I can’t give you one. The FBI doesn’t have women as agents.’

It was an inauspicious beginning for the girl from Auburn who would eventually become the highest ranking woman in the agency. The next year, 1974, saw her promoted to detective. By then McChesney had a job with the King County police that she loved, as a fingerprint examiner, a civilian position with duties including fingerprinting, photography, and evidence collection.

She was good at her job, fast, focused, and efficient. Her supervisor encouraged her to apply for an opening for a policewoman. “He said this because he was all it ever was,” says McChesney. “I love coffee last spring at home near Los Angeles. ‘It was really nice in the workplace to have someone recognize your abilities.’

She thanked him for the encouragement, but noted that she didn’t meet the job condition that she be 5’4” and at least 110 pounds. “I was neither.” Her boss was unimpressed. “He said, ‘Why would you let the requirement stop you?’”

So McChesney applied, and took the civil service exam and scored very well. But the sheriff resisted hiring her. He appealed to the county’s civil service commission, which instructed the sheriff to hire her. He acquiesced, saying he could take her on, but that she couldn’t be insured. He faked an injury to lure his victims. “We got plaster around, which helped the team realize he was the one doing it,” says McChesney. “It was the early 1970s and women were showing they could be effective police officers, valuable in ways their male counterparts weren’t.”

She trained at the police academy, with five other women in her class. Then, in 1972, she went on patrol. “It didn’t exactly be my goal,” she says. “But it was an extraordinary experience.”

Posited to the sex crimes unit, she joined the task force investigating serial killer Ted Bundy. McChesney’s particular duties included interviewing the women in his life. She was able to learn things his friends and girlfriends were less likely to share with a male detective, she says. A former girlfriend of Bundy’s told McChesney that she had been beaten. “We picked up pieces that led us to Bundy as a suspect.”

“Her best detective work was unassuming,” former detective Robert Keppel ’66, ’67 writes...
tracking

about McChesney in her book The River Runs Red: The Jonestown Massacre. “Her ability to handle the small details and enthusiasm for her work made her a valuable asset to the FBI and the task force.”

She moved with her family to Washington, D.C. in 2000 to work in administration. In 2003, she was recognized in a lawsuit charging that it discriminated against Hispanic agents, and the case was settled. McChesney’s duties included developing a promotional system for agents that was fair, equitable, and transparent. Generally, the process hasn’t changed from her design.

In 1978 she and her colleagues helped review the 1978 case of the Zodiac killer in San Francisco. “We had 500 people working on the case, and we never pinned anything down.”

After her work at the FBI, McChesney continued to work in administration. In 2003, she was appointed to the FBI’s_industry leader in Synergos Association Management’s Northern Pacific Chapter. Kyle Jordan

A young survivor

by Haanloes Svermeilen :: Fresh from an early morning TV appearance, Jennifer Merschdorf ’96 grabbed a seat in her loft’s Seattle apartment and pulled out her phone to check in with her office in New York. Next on her schedule is an interview, then lunch with her mother, and then time to meet up with a few old college friends. This day is a balance. Some work, some family time, and some fun. It’s all off the beaten path, as she says. “I manage to work in a few weeks of vacation as well.”

Jennifer Merschdorf ’96

She Smiles

The 2010 John M. McClelland Jr. Award from the United States Public Health Service for her work in animal welfare.

She learned about Merschdorf in 2007 and, after meeting with her daughter, Kaia, she decided to write a book about her experience. In 2010, she launched her debut novel, She Smiles.

She has been awarded the John M. McClelland Jr. Award from the United States Public Health Service for her work in animal welfare.

She learned about Merschdorf in 2007 and, after meeting with her daughter, Kaia, she decided to write a book about her experience. In 2010, she launched her debut novel, She Smiles.
By Eric Sotossen :: When you fill out a career pathwaying the limits of knowledge, rising to "pioneer in your field" status. things are bound to get pretty technical.

Gene Rosa, environmental sociologist, lived that reality. penning papers with terms like "bio-sociology," "post-normal risk," and acronym-rich "pioneer in your field" status, things are bound to get pretty technical. 

Gene was not just interested in the environment for its own sake, but rather he had a deep desire to see a better world, one with greater quality of life and well-being. and fewer environmental impacts," says Kyle Knight, '88 MA, "12 PhD, a Rosa student and now assistant professor of sociology at the University of Alabama in Huntsville.

"Gene was not just interested in the environment for its own sake, but rather he had a deep desire to see a better world, one with greater quality of life and well-being. and fewer environmental impacts," says Kyle Knight, '88 MA, "12 PhD, a Rosa student and now assistant professor of sociology at the University of Alabama in Huntsville.

One of Rosa's first publications, written with his Syracuse University doctoral advisor Allan Mann, looked at reducing environ.
CHARLES ARGERISHER 1951–2013

Equilibrium

by Jana Argerisheva

Charles Edward Argerisheva, emeritus professor of music at Washington State University and a resident of the Palouse area since the 1980s (died April 14, 2013), was the king of the Palouse Symphony, a recording of his music was among recognitions of his music were the Montreux Jazz Festival as the first director of the Seattle Symphony in 2013, his father, and his shelties, Snow and Sophie. Family, friends, and colleagues will miss his wit, generosity, and commitment to the musical arts. His life was rich in music and personal warmth.

In late April, on a beautiful spring day, the procession to his grave in the Monroe Cemetery was led by a Dixieland brass band playing “Just a Closer Walk with Thee” and, of course, “When the Saints Go Marching In.” —Editor

Listen to some of Charles Argerisheva’s music at

wsm.wsu.edu/news/charles-argerisheva

tracking...
Faculty and Staff
Kenneth R. Byrne 61, Statistics 84-2012, April 8, 2013, Pullman.
Harry A. Coughlin 52, WSU County Extension, March 23, 2013, Pullman.
Earl Philip Dinder 65, Language Center, May 28, 2013, Moscow, WA.
Mark Hanchum 95, WSU Men's Basketball Coach 1976-1971, April 12, 2013, Spokane.
Eugene L. Lister 63, March 20, 2013, Spokane.
Susan Kape-Odenborg 57, Student Advising and Learning 1993-2013, April 17, 2013, Moscow, WA.
William W. “Wild Bill” Snavely 93, Methow Photo, WSU Campus, March 9, 2013, Pullman.
Kevin R. White 84, Senior Advisor, May 2012- 2013, May 24, 2013, Seattle.
Leone Elizabeth Wilson 87, Secretary 1950- 1952, March 15, 1913, Leavenworth, WA.
Oceanica and the Victorian Imagination: Where All Things Are Possible edited by Richard D. Fultsof ‘75 PhD and Peter H. Hoffenberg.
RICHARD L. DUTTON, PUBLISHING COMPANY
2013 Review by Hananividade Sernadoncive: Decades of loweria and loweria was written by Robert Louis Stevenson, Jules Verne, H.G. Wells, and Joseph Conrad may well recognize the current of interest in Oceanica, or the South Pacific, that runs through their stories.

During that period, from the 1830s to 1900, tales, photographs, travel books, and essays all fed and informed the imaginations of the Victorian people, shaped these views of “Oceania,” and affect their new cultures. Given its small role in the imperial scheme, “the South Seas looked unusually large in the metropolitan Victorian imagination.” write the editors of Oceanica and the Victorian Imaginative. Richard Fultsof and Peter Hoffenberg. Victorian at all the laws were fascinated by the exotic elements of the South Pacific, as well as the possibilities of finding or creating a fortune and of reinventing oneself in a new environment. The editors write of Samoa, Hawaii, and Australia “...these exotic and distant lands and people were central to the stimulation of the creative imaginations of the age.”

Hansson and literature professors from around the world contributed essays to this tidy book, among them Ingrid Barnum 73 PhD, an associate professor at Gonzaga University, who explores domesticity and masculine identity in her essay, “At Home in the Empire.” She focuses on Joseph Conrad’s first novel Annyvy’s End, the story of a Dutch trader in Borneo. She also looks at Robert Louis Stevenson’s short story “The Beach of Falesa,” a tale of a British man on a South Sea island. Both pieces were written in the 1880s. Barnum notes that both men moved to the “edge of the Empire” and took lives that were native to their new countries. She compares the two characters, one who can’t get the Empire’s values for reality and the other who does.

Fultsof’s own essay focuses on the South Seas in mid-Victorian children’s imaginations. While the book did exist, Oceanica was pretty much unknown to Victorian children since it was for children’s magazines and the tales of returned missionaries. For them it was place of innocence, of adventure, of excitement and danger.

While this book is of interest to admirers of the Victorian period, particularly of literature, this book will be most useful to scholars and historians seeking to understand the Victorians.
introspection. Throughout Kittel’s imagination, the baseball becomes playful, poignant, and rugged.

“Love Ponders Friendship” through his game relationship with the catcher Gonzalez: “We worked at it / talked a lot, and never really worried / where we’d end up.”

In “Love’s Resolve,” Love is confronted by his manager. Craft with the fact that he’s already know. It’s just / in

His first patient, a woman / it comes a lot faster.”

In WSM Fall 2013

By Julie Eckardt ’13

A small discovery

This book honors the author’s grandfather, describes the sometimes difficult life of a doctor in the western frontier, and offers views into the early days of Idaho’s Sun Valley, capturing much of its history and character.

new & noteworthy

Luna Sea by Kim Roberts ’82 2012: Aho Jones, harbormaster at Lahaina, Maui, investigates the murder of a local troublemaker in this mystery set in Hawaii and filled with sharks and family characters on the dark side of paradise.

The Boys From Ireland: An Irish Immigrant Family’s Involvement in the Civil War by Sue W. Moloney ’53 2012: In this historical fiction, a group of dispossessed Irish immigrants find themselves embroiled in America’s Civil War, enduring poverty, starvation, and the loss of family members.

Biodesign Out for a Walk by Lowell Harrison Young ’72 2011: After one student questioned the broader importance of design to the field of engineering, high-school biology teacher Young embarked on a revolutionary class to integrate biology with inquiry into the physical, mental, and spiritual nature of humans. The resulting explorations, which included following John Muir’s path through Yosemite, led to insights for the teacher and a new kind of education on biodesign for the students.

Characterization of Biomaterials edited by Amit Bandyopadhyay and Sumita Bose 2012: Biomaterials researchers come from a wide variety of disciplines: biology, materials science, tissue engineering, chemical engineering, mechanical engineering, chemistry, and physics. This reference book, edited by two WSU mechanical and materials engineering professors, offers a general guide to analyze and comprehend the characteristics of different biomaterials.
MYTH #27 in the PLANNING YOUR ESTATE SERIES

YOU HAVE TO GIVE ALL... OR NOTHING

- OR NOT -

Truth is, your estate plan can provide for anyone and everyone, including WSU. Just contact one of our planned giving professionals.

Let us show you how easy (and risk-free) it is to create your own legacy.

DICE, ORIGIN UNKNOWN

Used in Asia for gambling, recreation, and fortune-telling since before recorded history.

www.foundation.wsu.edu/giftplanning

PHONE: 800-448-2978

EMAIL: gp@wsu.edu