



## **TWV Podcast #072**

### **The Importance of Asset Management with CH2M's Scott Haskins**

Show Notes at <http://thewatervalues.com/pod72>

**Intro:** Welcome to The Water Values Podcast. This is the podcast dedicated to water utilities, resources, treatment, reuse, and all things water. Now here's your host, Dave McGimpsey.

**Dave:** Hello and welcome to another session of The Water Values Podcast! As my son Joey said, I'm Dave McGimpsey. Thanks for joining me for another episode of The Water Values Podcast.

Have a great guest today – another individual who serves with me on the AWWA's Strategic Management Practices Committee. But before we get to that, please consider leaving a rating and a review on iTunes or any podcast directory on which you listen to the podcast. Greatly appreciate your favorable rating and review.

Well, today's guest is Scott Haskins of CH2M. He's a Senior Vice President there and also CH2M's Director of Strategic Consulting. He's got a lot of experience in the utility sector, and international experience at that. And today we're going to tap that experience to discuss asset management. This is an incredibly important aspect for utilities and Scott sheds a lot of light on the subject and shines that light on some lesser known aspects of asset management. He does a great job and it was a privilege to sit down with him, as he has a pretty hectic schedule, so him making time to share his thoughts on asset management was a win for all of us.

With that said, let's get on with it. Open the valves, fasten your seatbelts and here we go.

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**Dave:** Well, Scott, thanks so much for coming on to The Water Values Podcast. Really appreciate your time. To start off, Scott, could you tell us a little about your background and how you got interested in water?

**Scott:** Sure, David. I've been involved with water for some time. My background, after I got a master's degree from college, I wound up joining Seattle Water for the City of Seattle. So I go and had a thirty year career with Seattle Water and then Seattle Public Utilities which was a water, wastewater, stormwater and solid waste utility. I was Deputy Director there and really moved around the organization and had a lot of exposure to water.

And then eight years ago I left Seattle Public Utilities and joined the consulting world, CH2M Hill. I'm currently the Director of Strategic Consulting for CH2M Hill, a Senior Vice President. I am responsible for a number of different practices that are company-wide such as asset management, financial management, some environmental management, operation and maintenance, management consulting. And so I get involved with a lot of public agencies,



private agencies and the industry itself in a lot of different water issues. So that's a little bit of my background and my history with water.

**Dave:** Terrific. So, Scott, could you tell us exactly what asset management is. I'm not sure that all the listeners know what asset management is. They might have heard about it, but I'm guessing that not everyone knows exactly what it is. So could you inform us and educate us about that?

**Scott:** Yeah. Let me comment on that. There's a text book definition for asset management that says that it is a meeting agreed customer and environmental service levels while meeting life cycle costs at acceptable levels of risk. There are different variations of that definition but you're dealing with cost. You're dealing with risk. You're dealing with service levels and balancing those in order to optimize your infrastructure and your operation for customers and for the environment. There are certain kinds of questions that you ask such as, "What's the state of my assets? What is a sustained level of service and performance that is required for those assets? Which assets are critical for sustained performance? What are my best maintenance and capital investment options?" And there's methodologies for that that we can talk about. And then, "What kind of funding strategy is best for those assets?" So those are some different aspects of asset management. It is around infrastructure, but a lot of us take a holistic view of asset management and think it's pretty synonymous with utility management overall because it deals with processes, technology, as well as the work force and the people side of utility operations.

**Dave:** Sure, I would agree with you whole-heartedly about the more holistic nature of it and kind of relating more to utility management than just simply asset management. Could you talk a little bit about the various components of it. You mentioned them quickly but could you go through and give us greater detail? Let's start with the financial piece of it. Start with the money, right?

**Scott:** Yeah, sure. It's sometimes all about the money. I think that there are some underlying principles of asset management and a lot of these principles do relate to money. For example, what asset management asks us to do, and best practice for asset management, is to look at whole of life costs, not just to look at capital investments but to look at operations costs, management costs and the risks associated with managing those assets. And to come up with what's the best investment strategy in order to optimize a category of assets where facilities are specific assets over the life cycle of that asset. And what you might say is that if you don't do that and don't pay attention to that that you're really giving the customer of water, let's say, or the environment, you're sub-optimizing and you're really not giving them the best value. So, it has to do, on the money side, with making investment decisions that are life cycle based. Something that we, I'm sure you're well familiar with and a lot of the listeners would be familiar with, and that is triple bottom line which is looking, not just at financial but looking at environmental and



social as well as financial costs, benefits and risks in order to help make those investment decisions.

**Dave:** Sure, and in terms of the risk, let's just look at environmental risk, how do you quantify that to put it into the plan?

**Scott:** That's a great question because there are diverging opinions on that. There are many that believe that you can monetize risks and impacts and there are others that use decision models and identify what the risks are. Then when you're looking at the financial equation, you say, "Are these risks significant enough to change the alternatives that I'm pursuing here?"

There's a business case evaluation, as another way that often you look at assets and look at investment decisions where you look at if I did nothing different than what I'm doing today, what would be the costs, the benefits, the revenue impacts, the service-related impacts and the risk impacts. And then look at alternatives to that. It could be a capital investment. It could be a change in maintenance strategy. It could be technology investment. What are the different kind of actions? And what would the cost be of those? And what would be the risk reduction for that asset that can speak to things like a system failure? What would be the impact if that particular asset or category of asset failed? What's the probability of that and really working to minimize or optimize the equation that considers the probability of failure as well as the consequence of failure?

**Dave:** Sure. And so these asset management models, it seems to me from what you've described can vary widely. I'm just kind of curious, when a utility is looking at asset management plans, is there a certain size that your utility ought to be before you really consider an asset management plan? How does it scale when you are considering the size of your utility?

**Scott:** Well, that's a great question. Some people can say that there's an asset management "light" for a more intensive asset management type of program that you might have because smaller communities, smaller water systems, wastewater systems sometimes the investment and the staff capabilities aren't as great. But what you can do is that you can basically say that there's some underlying principles of asset management that you can make more versus less sophisticated, and really achieve your goals regardless of size. So things like, when I'm making a decision about capital replacement program, am I looking at whole of life cost?

A second thing would be, and you mentioned asset management plans, for different kinds of categories of assets, let's just say for a collection system in wastewater or a distribution system in drinking water or water supply facilities or treatment facilities, for example, or pump stations, for that category of assets which you can do things like, "Do I know what my assets are and do I have an inventory of assets? Do I know what condition those assets are in? Do I understand what the risk signature of those assets are? What are the most critical assets for my operation? Where

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do I have redundancies versus if it fails, there could be some big consequences? What are the maintenance strategies? Am I running these to failure? And then responding, or do I have a preventive maintenance type of program?”

And so some of these things like that, you wind up being able to really scale it, applying the principles in which you know. And then it’s a question of how refined you get in that. How you might involve customers. How you might improve your business processes. How you might have financial or centralized computer management systems or customer systems. How GIS systems, how you might integrate those. So, depending on the size of the utility, some are more sophisticated versus less sophisticated but you can really apply asset management principles regardless.

**Dave:** Right. You said something really interesting there. You said a lot of things but one of the things that my ears really perked up on was when you said “involvement of customers”. I think that that really ties back into what you said initially when you were describing asset management plans. Part of it the service level that you’re giving. It seems to me that the utility ought to involve its customers in its asset management plan because of the service level. The customers are the ones that are going to be able to tell the utility what the service levels are. At least, outage and things like. The utility can look at hard data, right? But to actually get that customer feedback seems pretty important.

**Scott:** Yeah. And I’d say I see that happen at several different levels. I think on common way for utilities to involve customers is through rate-setting processes and rate advisory committees and things of that nature. That’s probably the most common. A second would be like levels of service studies that survey customers and ask them what level of service they’re interested in. In other words, what level of disruption of water service are they willing to endure. Or would they rather pay more in rates in order to have a higher level of service? So, that’s common.

I’m often seeing now, and I’ll just use Albuquerque as an example of where they have gone through and they have identified a level of service dealing with disruption of service, like you mentioned, or a regulatory performance, efficiency and other factors. And then rather than just say the utility knows what’s best. What they’ve done is they’ve gone out to the community. They’ve created focus groups and they’ve gotten feedback from customers on well, “What’s the service level that you’re comfortable with?” And they’ve actually made some revisions based on that.

Australia has even gone a little further and they’ve gotten down to certain kinds of work and disruption and said, “Well, do you want to pay more to have less disruption of service?” And what they found for one major utility over there was that the customer didn’t care if there was some disruption of service if it was planned. And maybe even, if they knew what time it was and maybe it during work hours rather than when they were getting up in the morning or having a

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shower in the evening, you know, those kinds of things. So actually engagement of customers is truly important and often utilities start with the service level as a starting place. Where this is what we're trying to achieve. Some of these service levels are regulatory driven but a lot of others are not. So they start with that. And then if you have a higher versus lower level of service then there's a cost delta for that difference.

**Dave:** That's absolutely fascinating. As you were speaking, I was thinking in my head about all the different regulatory proceedings I've been in. There's been customer input but it's been more customer input taking through some sort of hearing like a field hearing where the actual regulatory body goes out and receives that feedback. I don't think I've recalled a utility submitting studies that it's done of its customer base in support of asset management projects. I'm kind of curious, have you ever seen that? What has been your experience to the extent you've helped utilities gain approval for cost recovery for asset management plans?

**Scott:** Yeah. Well, I would just comment overall that the United States is a little different from some other countries. In Australia and Great Britain, for example, and some other European countries, they have economic regulation as well as environmental regulation and so there's perhaps a little greater accountability to a standard. In the United States the standards are usually established partly by convention in the industry but it's really up to the individual utility, the boards, the elected officials to establish that and to decide on what level of reporting and accountability is made public. In the Safe Drinking Water Act, water quality performance is required and there's detailed water quality performance, but there's not regulatory requirements to really talk about levels of service, to do a report card, if you will.

So things like environmental reporting are emerging as some priorities. The investment community is wanting to see more data and information around the performance of utilities. They're interested in looking also at, with aging infrastructure as a major challenge. What are the plans, the capital plans, the repair replacement plans, the maintenance plans, the asset management plans associated with the integrity of the system from a customer and environmental point of view?

**Dave:** Sure. Now, we've talked a lot about what these plans look like and things like that. What about for the utility that either doesn't have a plan or whose plan is very inadequate. It's old. It's outdated and stale. What does a utility, what kind of information is needed in order for a utility to get started?

**Scott:** That's a great question. I'm going to through out there one thing that is becoming more prevalent. If you basically say that your operation, your utility operation and management and asset management that there are leading practices that are associated with good asset management programs. And you could also say that there are measures of performance of metrics that help you better understand that.

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One thing, a term, is called benchmarking. Which is about assessing your utility in terms of where it stands relative to leading practice. To what extent have you developed asset management plans? To what extent have you documented them? To what extent have you applied it across your utility? To what extent is it effective? And there's, for example, some effort right now in our industry, in the United States, to pull together benchmarking that identifies what these leading practices are. It includes, and the Water Services Association of Australia has been involved for about ten or fifteen years doing this and a lot of utilities in the U.S. have participated in that.

On the metric side, American Water Works Association has a metric survey. NACWA has a pretty financially oriented survey. So there's basically benchmarking that can tell you how you stack up relative to others in the industry. Then you can learn from peers. You can network with your peers. So, that's one method through benchmarking to start with the practices and the metrics, the kind of targets that you set then develop an improvement plan around where your biggest gaps are and where your biggest needs are.

**Dave:** I'm glad you brought up benchmarking. That's on my topic list and so I'd love to do a podcast dedicated to benchmarking. Once you do have your program in place. Say you've gone out and benchmarked and say, "We need to focus more on categories x, y and z." Once you start down that process of your asset management plan, how long do you typically, are you going to have to wait to see the benefits?

**Scott:** You know, surprisingly enough, you can call it low hanging fruit. You can call it more immediate short-term opportunities to save money or improve levels of service that can be done the first year that you look at it. For example, there are utilities, some major utilities, that have basically invested in asset management and after a year or two, have more than recouped their investment. There are cases, for example, Seattle Public Utilities, when it started doing asset management, they identified about 15% of reduction in initial capital costs by doing business case evaluations that we talked about a little earlier and saved one hundred fifty million dollars of those costs is what they documented. But they also saved life-cycle costs far greater than that.

The City of Columbus invested five million dollars in their asset management program and pretty quickly achieved savings just in their capital program that exceeded that and they have demonstrated and publicly presented information that where they've achieved through that business case evaluation fifty-five million dollars' worth of savings and additional millions of dollars of savings in their maintenance activities. So you can actually make, by prioritizing the improvements that you implement, you're able to make some, get some immediate cost savings. And by looking back at those service levels we talked about, by actually establishing a service level rather than just having it happen, saying this is what we're striving for. Having a target. Reporting against that target. Identifying the kind of actions that are needed in order to impact



service levels as well as costs. Those are the kinds of things you can do internally in the short term around performance management that can get some quick savings.

Yeah. I think you're exactly right. There is a lot of low hanging fruit out there. I've seen large meter replacement programs go in and payback is a matter of months as contrasted with even a year. Once you have your plan in place, Scott, how often do you recommend or how often do you think utilities ought to review that plan, make sure they're staying on course?

**Scott:** What would be typical, would be some form of review on an annual basis. Because the way that investments are made are typically during budget cycles. So what would be an ideal approach and what a lot of utilities are doing is having a quarterly type of process where they're tracking implementation plans as well as asset performance. They're identifying, they're looking at performance relative to targets and then what they're doing is they're modifying, on an annual basis, what they're going to focus on, what the priorities are for the coming year. So they do have long term plans and it is a journey but you can basically segment that into initiatives. And you can segment that into annual plans that can be a focus for a utility. And as you were saying earlier, it's a lot like being utility management not just asset management and it's a way of doing business.

There's also been processes set up to review business case evaluations - a cross-functional review across the different functions of the utility. And processes set up so that it can be ongoing. It's not something that happens just on annual cycles or quarterly review cycles. It can be for all capital projects for an example trying to optimize that capital project and the investment strategy.

**Dave:** What about integrating your asset management plan with your strategic plan or with any other plans that might be present within the utility?

**Scott:** That's a great comment because there usually is a bigger context within which asset management or utility plans happen. And strategic plans are often what that vehicle is. And so having a strategic plan with and embedding within that strategic plan, some goals, some strategies, some actions plans that relate to asset management. That's the kind of thing we're seeing. We also see frameworks out there that really help guide this. There's an ISO55,000 asset management standard that's been developed internationally in the United States under EPA's leadership and with participation from industry associations. There's an effective utility management framework that exists that has ten attributes of effectively managed utilities.

We also have specific strategic plans of utilities and there are usually many utility management and asset management components that are embedded in these strategic plans as well as facility plans, as well as master plans. And some of these are legislatively required or regulatorily



required but often not. And some of them are voluntary but you're seeing a lot of these planning efforts that really embed asset management as a key component.

**Dave:** Scott, you've been absolutely great. I feel like we've just scratched the surface here of asset management and all of the planning and benefits that it has. So I'd love to continue the conversation but we're kind of coming up against our time here. So could you please tell folks who want to find out more about you and CH2M and asset management, where they can go to get that information?

**Scott:** Sure. Well, I have an email address for starters, [scott.haskins@ch2m.com](mailto:scott.haskins@ch2m.com). There's also the CH2M Hill website where people can go to. You can find me there but you can also find the different kinds of programs that we have that would relate to utility management, would relate to asset management and related topics. So, I think those would be good suggestions. I think that the listener can also go to AWWA, WEF, NACWA, AMWA, and APWA and other associations have a lot of great information on the subject matter we've talked about here.

**Dave:** Terrific. Again, Scott, thank you so much for your time. Really appreciate it.

**Scott:** Ok. Good to talk to you David. Thank you.

**Dave:** You betcha. Bye.

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**Dave:** I hope you enjoyed that interview with Scott Haskins. Great guy and very knowledgeable, as I'm sure you figured out.

Here's a few takeaways. The first is an important theme that I've talked about in the past and that's customer engagement. Remember that asset management plans are tools to achieve service levels. If you don't know what your customers want and assume you already know, I think that's a bad strategy. So utilities, engage your customers, not just on asset management plans but on your utility as a whole. We've had guests on that have spoken on this before – George Hawkins, Donna Vincent Roa, the San Francisco PUC and more. To me, it's just so important that utilities engage with their customers – while it might seem difficult at first, you'll get better with it over time and the dividends from your customer engagement will be substantial.

Another takeaway is the scalability of asset management plans. Smaller utilities might shy away from asset management planning because it sounds like you'll need some expensive consultants to get the job done. Not true. Smaller utilities can take advantage of as Scott called it asset management lite. Figure out what's important to your utility and your customers and set





benchmarks and devise a path forward for how you will improve the areas of most importance to you.

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In closing, please remember to keep the core message of The Water Values Podcast in mind as you go about your daily business. Water is our most valuable resource. So please join me by going out into the world and acting like it.

**Outro:** You've been listening to The Water Values Podcast. Thank you for spending some of your day with my dad and me.

**Dave:** Thank you for tuning in to the disclaimer. I'm a lawyer licensed in Colorado and Indiana. And nothing in this podcast should be taken as providing legal advice or as establishing an attorney-client relationship with you or with anyone else. Additionally, nothing in this podcast should be considered a solicitation for professional employment. I'm just a lawyer that finds water issues interesting and that believes greater public education is needed about water issues. And that includes enhancing my own education about water issues because no one knows everything about water.