GeoDesign without the Geo-Goodies

Philip Murphy from the University of Redlands presents ""GeoDesign without the Geo-Goodies"" at the 2011 GeoDesign Summit.

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Video Transcription

00:01 Philip Murphy, also from the Redlands Institute at the University of Redlands.

00:11 Waiting for my talk to magically appear..

00:15 Oops, we're a little further in there,, should be...mmmm, let's go back one.

00:21 Okay.

00:22 I hope you're all sated with geo goodies, because I'm putting you on a diet.

00:27 There will be no maps, there'll be no visualizations, there'll be no excellent, cool videos.

00:33 This is a project that's sort of wrapping up right now, the DIS common period...

00:39 ...just ended the third of December.

00:41 It's a project that I was brought into as...many projects will last five or six years by a collaborative mediator...

00:49 ...Carie Fox out of Portland. This was work done with the Institute of Environmental...

00:53 ...Conflict Resolution, which I now know is a danger sign.

00:58 They only ever called us if it was very big D, as in, it was already lots of trouble...

01:05 ...and they needed some innocents to go down there and get involved.

01:13 So I'll talk a little bit about Giant Sequoia National Monument, I mean, believe it or not...

01:20 ...it will come as a surprise, there were trees there long before we were.

01:24 Giant sequoias, these are the trees that are 3,000 years old in places.

01:29 But we've been planning and building and living and dying in that area for many years.

01:33 But, in recent history, back in 1990s, there was an MSA, a mediated settlement agreement...

01:43 ...with the Forest Service and local communities about how this area should be managed for the good of all.

01:52 In 2000, it was sort of formalized and President Clinton made a monument of it.

01:57 If you make a monument of an area as distinct from a national park or a forest, you create a proclamation.

02:04 And a proclamation is an interesting document that sort of says that, here will be this area, this is the area.

02:11 It also puts in a fair amount of management suggestions - well, I see, I guess more like constraints and rules...

02:18 ...about how it should be managed.

02:21 The forest, one of the things that was in that proclamation was that the Forest Service, one of the key things...

02:25 ...was that if you look at the area and, again, there will be no maps shown in this presentation - but if you were to look at a map...

02:31 ...there's a big, giant sequoia national forest, and right beside it, Giant Sequoia National Park.

02:38 The monument is a small area that sort of connects the two, and one of the questions when they were created...

02:44 ...this monument was, who would get to run it?

02:47 What turned out to be quite controversial, it was given to Forest Service.

02:51 The Forest Service was told to come up with a management plan, which they duly did in 2004 after multiple suits...

02:58 ...it was remanded back by judge to the Forest Service to try again.

03:02 The word "incomprehensible" was bandied around in that.

03:07 And in 2007, the process which I'm now part of...and Carie dragged me into - I'll blame her, was another attempt to...

03:16 ...okay, given all of that, we have to come up with a plan revision.

03:20 Some of the driving issues will be no surprise to many of you who look at natural resources...

03:26 ...and yes, there are no big urban areas involved in this work out here, this is natural resource areas.

03:32 The fire fuels build up.

03:33 As you know, the Forest Service is incredibly successful in fighting fires and suppressing fires over...

03:37 ...the last 50 years, and one of the unfortunate side effects is that you now have a lot of forests...

03:43 ...have an awful lot of dead and semi-dead timber in it, small trees and medium-sized trees...

03:49 ...that burn very nicely if you get a good fire going.

03:52 In the case of the giant sequoia, that's a great interest.

03:56 Sequoias are fire-loving trees.

03:58 They only regenerate when they have a good fire.

04:00 The reason for that is that small sequoia saplings don't compete very well with other trees.

04:05 So, the fire has two great purposes; it burns all of the vegetation around from underneath the trees...

04:10 ...and it also gets the pinecones to open up and drop their seeds.

04:16 So seeds fall in nice, bare area where they can get established, and off you go for another couple thousand years.

04:22 So, as fire fuels, that was of great concern, there's a lot of people living in the monument area...

04:24 ...have houses and have lived there for a long time, and they are concerned about being burnt out of it.

04:29 Tree removal.

04:31 One way to get the rooms, any room, you have a public meeting and to quickly shift into two groups...

04:34 ...is to talk about tree removal.

04:36 Under what circumstances should a tree be cut?

04:39 If you want to reduce fire fuels, you want to get stuff out of there, including medium-sized trees.

04:44 Are you going to cut those trees to get them out of there?

04:46 Do you want to let natural fire burn those trees away?

04:49 How do you get the forest back to what's called a fire-resilient state?

04:52 Or, it can go back to loving fire but not being consumed by fire.

04:56 Access and recreation in 2007, those who were involved in the very long and torturous MSA agreement back in 1990...

05:06 ...want to know where the heck have all the things you promised to do back then, where are they now?

05:09 You still haven't done them.

05:11 So, we all have our nice little three-ring circuses; here's my attempt.

05:17 And of course I'm using maps and geodesign as the thing.

05:20 The three parts that Carie and I have sort of found, were looking every time is the thing I call governance.

05:24 And governance...well, let's start with an easy one. Social ecology, you all know, that is the landscape...

05:29 ...the people, the fauna, the flora, the trees, how they all work together, how they operate.

05:33 Obviously we change, and of course, this change, whether it's a design change or not design change.

05:38 Part of what's really putting the pressure on the giant sequoia is climate change.

05:43 If you ever see a map of where the last remaining giant sequoias are, it's a very thin strip...

05:48 ...a hundred, a couple hundred miles long, at the crest of the Sierra Nevadas.

05:52 They need moist soil, but not too moist, and generally they've been retreating up and up and up...

05:58 ...where they're sort of running out; there's no "up" to go anymore.

06:01 So you're looking at these 2,000-year-old trees that are, you know, they're endangered.

06:05 And so, climate change, we could go either way.

06:08 It might help, it could hinder them.

06:10 So, some of the change you get is not what you designed but what's actually happening to your resources.

06:15 And of course, some we hope to design.

06:17 Governance is a word that I use and I can't stand and I'm delighted if someone could help me come up...

06:21 ...with a better one, but it incorporates all of the issues around who governs this?

06:24 What documents govern this?

06:26 How do you make a decision?

06:27 Who will make a decision?

06:29 I noticed in Carl's taxonomy he had to pick an organization.

06:35 In this case, what's key, and what I said before, it's the documents.

06:38 There are now about five or six documents; there were a couple of regional and national forest plan guidance things...

06:44 ...passed over the same years as the list I gave you.

06:47 So one of the problems that faces the forest supervisor is, we have all these competing

documents...

06:51 ...telling us how to run this place; how are we going to do it?

06:53 If you have a public meeting, everyone quotes the proclamation.

06:56 So, one of the things we quickly realized is that, so, but this stuff, we've seen plenty enough so we're not going to mention it...

07:02 ...the overlap is very interesting.

07:05 How should we evaluate it, how might the accident, okay, we all know this stuff..

07:08 For me, how should we evaluate the proposed actions?

07:11 How are we going to do that when it's not just about, you know, we have our normal...

07:17 ...we do our simulations and so forth.

07:19 But for us, the key is how are we going to actually decide what's a good-looking outcome.

07:24 It's big D in the sense that the people in the room, in these public meetings be finding for 25 years...

07:29 ...and there were many different groups with many different historical connections.

07:33 So we very quickly, the assessments going down that left-hand side and that's what facilitators/mediators do very well.

07:39 They go in, they talk, they have coffee, they have tea.

07:42 They do very quickly to get down to what's the meat of what's going on here what has to be done?

07:48 What has to be thought about?

07:49 Having got that, of course, everyone's very interested in how you might change the landscape because they all have ideas...

07:54 ...about why they have a good way to do it.

07:56 Some would like to garden the landscape back into submission, others would like to let fire just burn.

08:01 See what falls out of there.

08:03 And so, and how we need to evaluate.

08:05 So that was the key part we wanted to focus on, and the very first thing, oh yes, the word is going to be geo goodies.

08:11 There's utility and incredibly deep forest simulations being done. There's fire shed simulation and all sorts of stuff...

08:15 ...that has been done by the Forest Service.

08:17 There's also the great Forest Service-generated tools to show different management practices...

08:22 ...how that would change over, how that would affect the ecosystem over 100 years.

08:27 We were promised air quality because one of the unfortunate things is if you burn, if you let fires burn in the monument...

08:33 ...you're sending people to hospital down in San Joaquin Valley.

08:35 So, you have to really find those few good days a year when you can burn.

08:39 So, when I left here last year, I was totally not convinced that geodesign had anything to say to me.

08:48 After a year of actually thinking, which I find does actually help, I've got a couple of strong things, issues...

08:57 ...the thing I'm talking about today, which was the place of decision making in this.

09:00 And the second is, that particular, I know it's only one flow; that flow goes down and up and down...

09:06 ...and down again is actually critical.

09:07 If you want to figure out, I don't have time to go through it now, but if you think about that...

09:12 ...if you think about different idea about they are different designs, the different design methods over there...

09:17 ...eight or nine or ten or however many there are, in a sounder ecoprocess there's about...

09:20 ...five design methods going simultaneously by different groups.

09:23 There are that whole up/down three-hour stuff, and...you try and do all of those in one shot and everyone...

09:29 ... is amazed about it the time you get to DIS and the alternatives, you often don't have the best alternatives.

09:33 And so, at least staying away from this, I now know in the future how we're going to change that.

09:38 So, I'd like to try and change it.

09:41 We've had many places there this is typical legal process; we had a number of places where we...

09:45 ...decided we would try and intervene on this.

09:47 The very first thing we did was we actually put up, the proclamation is only five pages so we put it up on the web.

09:52 We made it simple that you could click on any part of the five pages.

09:56 Notice also that - actually, I've jumped over - Thom Cheney's wonderful artwork.

10:00 One thing facilitators/mediators do, and they think it's so natural they can't understand what's wrong with technology.

10:04 They don't have meetings in ugly rooms.

10:07 It's just a thing you don't do.

10:08 Not unless you're, you know, absolutely desperate.

10:09 You try to make nice rooms.

10:10 So we hired an artist; I mean, a revolutionary idea.

10:13 And so all of the stuff you see around this... For us, technologists, it's only art, background, I mean, let's get to the engine.

10:19 This really doesn't matter to people as to how they feel about what you're inviting them to participate in.

10:25 So, we took the proclamation.

10:29 You can imagine after 10 years of fighting that lots of people have written lots about what the proclamation means.

10:33 I should, the proclamation had many - this is, for instance, the proclamation says we want to preserve objects.

10:42 No kidding. The word "objects" appears right there.

10:43 So, you can imagine the argument about that.

10:46 What the heck is an object?

10:47 Is an ecosystem an object?

10:48 Is a pebble an object?

10:49 Is an acorn an object?

10:50 What's an object?

10:51 How do we preserve it?

10:52 So, there were commentaries that have been developed over the year, how we gather those together...

10:55 ...we made it clickable so you could go see those individual commentaries, what people talked about...

10:59 ...you could comment on the thing itself.

11:01 As I said, there's lots of...what the heck's an object?

11:06 So these were ways to get people to start thinking, but what are the documents governing this?

11:10 Before you start saying, well, the proclamation says that you can't drive your car into the forest or you can't take...

11:13 ...your snow ski in there. Have you read it?

11:16 Have you thought about it? Have you looked at all the parts?

11:17 'Cause it's a very conflicting document.

11:19 And again, with the science of IGIS being developed over 25 years...

11:24 And about a hundred people, I would say, got online, started reading this stuff, started getting the impact.

11:28 So, at least there was a conversation going.

11:32 Engaging on action design.

11:34 What might actions look like?

11:35 I know it's not just a question of do I burn it or do I cut it?

11:38 But that's where everyone wanted to start with. You know, are you going to cut the tree...

11:41 ...or are you not going to cut a tree?

11:42 So, to do that, we have to talk about, well, there are other things that you need to think of...

11:46 ...that you want to worry about, any action you're going to take on this forest.

11:51 So, we wanted to develop a decision framework to look at all those criteria.

11:55 Now some of those criteria come easily out of your, how would you call it, when you evaluate the socioecology...

12:03 ...and you've got some metrics from that.

12:04 But there are other metrics.

12:06 Some of the key metrics on the right-hand side of those intersecting circles are things with trust.

12:10 The Forest Service has really blown trust in that area over 25 years.

12:13 There's a lot of people with relations, whose relation with the Forest Service and with their neighbors have been very damaged...

12:18 ...by arguments and fights that have occurred.

12:20 So, when we built, when we're looking at this in framework, we're not just looking at those

things that...

12:25 ...come straight out of you know, if you can imagine how the future will look with these changes in place...

12:30 ...how's my evaluation going, how am I doing?

12:33 Okay. Back to this. Okay.

12:36 So, you're not really meant to see this; this is a blurry thing, 'cause it was a very moving target.

12:41 But one thing I want to point out about this, and I do have this cool green light thing, so we have stuff like...

12:46 ...protecting visual objects.

12:47 'Cause was the key thing in the proclamation, so that appeared in this, and we broke it down to...

12:51 ...smaller things - the water, the object, et cetera.

12:52 Well, the thing I want to bring your attention to is increasing enjoyment in the monument.

12:56 That's written in the proclamation; it's a beautiful thing, and it's written right there, you know?

13:00 They foster socioeconomics; there are many communities depending on that forest...

13:03 ...and if you spend much time in forests where people are using them, they're suffering and so this is critical.

13:08 I mean, people's livelihoods are at stake.

13:10 Made cost-effective, create a compelling plan; this is not what you're thinking, might expect to see there.

13:16 This threatens partnerships, this threatens connection to place.

13:20 Why a compelling plan?

13:22 Because it became very clear that a whole bunch of people don't want to see another planning process...

13:25 ...that ends up with a plan to get sued the day after it's published.

13:27 What's the point? Why should I participate in that?

13:30 So these are things that are about process, about relationships, and not necessarily about the straight substantive...

13:34 ...stuff we often focus on.

13:37 So, we began to realize we were having a problem.

13:39 We were trying to tell them we're going to build these criteria to help you evaluate plans.

13:43 A lot of public, you're going, Eh? How's that going to work?

13:46 Meanwhile, the Forest Service themselves were getting nervous, began to realize, wait a minute...

13:50 ...you're going to think about the decision model we're going to use at the end and use that to tell us...

13:54 ...what data to think about and to do research on?

13:57 Yes, that's what we want to do, I mean, that's, that's, I think the point, that's why what I said...

14:03 ...as that year went by and I thought about what I'd seen here, in particular, that flow from Carl...

14:06 ...okay, fine, I'm not the only person that thinks decisions are actually important when you're trying to design the data you want...

14:11 ...and the process you want to analyze.

14:13 So what we did was we decided to sketch the decision process.

14:16 This is the scoping, this is long before you [unintelligible].

14:18 We've got the Forest Service.

14:19 We came up with three crazy alternatives.

14:22 One of them was, let it burn, just let nature take its course and stay out of the way.

14:26 Another one was to cut everything in sight; go gardening.

14:29 And the third was to let every natural fire, was to manage with fire, but in a more sensible way.

14:35 We took a subset of those criteria that we have there, and then we got the Forest Service to do something very brave.

14:40 We asked each, for those three crazy alternatives, against those alternatives.

14:43 We asked the Forest Service experts, would you just give us a quick idea of roughly how you think this might work...

14:53 Talk about it.

14:54 And so immediately, you guys have all seen it.

14:55 When we started at, a - they had some great conversations themselves, b - the public began to realize...

15:00 ...you're going to tell us how it actually works and why you think about, instead of just

waiting...

15:03 ...until the end and giving us the final alternatives.

15:06 And so, this started conversations, and it also showed how a decision would work at the end of the day.

15:12 We then went on and I'm running out of time here, but these are all different ways where we got the Forest Service...

15:16 ...to write down, how do we think about this?

15:18 And they themselves are great.

15:19 I mean, for instance, this one is about jobs.

15:21 The assumption was when they started writing this, oh well, you know, cutting trees will be the best way...

15:24 ...to keep jobs going in the area.

15:26 By the time they finished, they had figured out putting out fires would actually be a better way.

15:29 They'll tell you how more people it actually involved and keep controlling the fires smoothly as they tried to bring it back.

15:35 And then we get, you know, public online, they put it in their own ways to play with this, they saw how it went, et cetera.

15:36 ...they sat down with these pieces of paper with the public and with the forest people and said...

15:40 Then we took it into big workshops.

15:42 And now, you've got real alternatives coming with real analysis, and we sat, and again, they took their...

15:50 ..."Why did you give it that rating? Why not this rating?"

15:52 And then they though it through again, what are the processes that are working?

15:55 I'd love to say it all worked out beautifully and that everyone's happy.

15:59 But, what happened to the geo goodies?

16:01 Well, time and budget knocked resource review assimilation.

16:04 There are a bunch of nasty people who claim that because we spent so much time thinking about how we should...

16:08 ...actually decide the alternatives within the time to do lots of analysis to the alternatives.

16:12 It could happen.

16:13 But more importantly, planning was determined problematic. The Forest Service themselves...

16:17 ...realize that what they really need, what they wanted most was not specific actions, but to figure out which...

16:22 ...documents really guide this forest.

16:24 And so it's totally more of a problematic level.

16:29 Let's skip over to summaries, I'm out of time, I want you through this more important piece.

16:33 Finally, just to wrap up, there's some connections and I wanted to point is Carie Fox and Thom Cheney's art.

16:40 If you want, if you like the WPA type art and you'd like to have it in projects, call Tom.

16:46 Thank you very much.

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