Kittitas County
Teanaway Solar Reserve

Public Comments
After April 5, 2010 – August 3, 2010

KITTITAS COUNTY FIRE MARSHAL'S OFFICE
411 N. Ruby St., Suite 2, Ellensburg, WA 98926

Office (509) 962-7657 Fax (509) 962-7682

June 14, 2010

Anna Nelson
Community Development Services
411 N. Ruby Street, Suite 2
Ellensburg, WA 98926

Re: Teanaway Solar Reserve Project

Dear Mrs. Nelson:

After conducting the final review of the above named project, I have the following comments/conditions:

- The minimum road width shall not be less than 20' in width. The spur roads may have a road width of 16' with 4' turn-outs placed approximately every 1000 feet.
- All cul-de-sacs must have a minimum turning radius of no less than 50'.
- A rescue toboggan with all required accessories, i.e., tow bar w/ spray guard, stretcher, etc., shall be made available to emergency services and stored in a readily accessible area in the operations and maintenance facility on site.
- A Knox box shall be posted on the buildings. Please contact the Fire Marshal's Office for more information.
- A gated entry shall have a Knox box located at the gate, and the gate must meet minimum county standards. Please contact the Fire Marshal's Office for more information.
- A 50' cleared area shall be maintained around the panels, with an additional 50' of area with reduced natural vegetation. Trees greater than 4" in diameter are to be limbed up, ladder fuels are to be removed, dead fall is to be removed, etc.
- Any contract with a local fire district, or annexation paperwork shall be submitted prior to any building construction.
- In the event that sprinkler suppression systems and/or alarm systems are to be installed within the buildings, each system requires a separate permit from the Fire Marshal's Office.
- Review of the final project submittals may include further requirements.

Any questions or concerns regarding fire service features may be directed to the Kittitas County Fire Marshal's Office. 509-962-7000.

Sincerely,

Brenda Larsen

Brenda Larsen
Fire Marshal

KITTITAS COUNTY
DEPARTMENT OF PUBLIC WORKS
Kirk Holmes, Director

MEMORANDUM

TO: Anna Nelson
FROM: Christina Wollman, Planner II
DATE: June 22, 2010
SUBJECT: Teanaway Solar Reserve SEPA Comments

1. Loping Lane and Wiehl Road shall be constructed to meet the minimum requirements of the IFC as adopted by the County, prior to receiving permit approval. A bond shall also be submitted which covers 135% of the full costs of final road construction requirements and repairs and follows all requirements of KCC 12.01.150. Final road construction requirements are as follows.

   After construction is completed, Loping Lane shall be constructed or repaired to meet the requirements of a low-density private road, as detailed in KCC 12.12 Figure 12-1. The road must be certified by an engineer licensed in the state of Washington prior to release of the bond.

   Wiehl Road is located within a county right-of-way and shall be constructed to public road standards from the intersection at Red Bridge Road to the intersection with Loping Lane. All requirements of KCC 12.04 County Road Design Criteria, 12.06 Stomwater, 12.08 Submittal Requirements for Construction Plans, and 12.09 Public Road Construction Control and Inspection shall be followed. The County shall be included in all phases of design, construction and inspection. A cul-de-sac shall be constructed at the intersection with Loping lane. The road must be approved by the County Engineer prior to release of the bond.

2. Within the project boundaries, the primary access roads shall be constructed with an all-weather surface and be a minimum of 20-feet wide. Secondary roads shall be a minimum of 16-feet wide, and a turnout provided every 1000-feet, or if the section of roads is less than 2000-feet the turnout shall be in the middle of the section. Turnouts shall be an additional 5-feet of driving surface for a length of 50-feet. Primary and secondary roads are those defined in Attachment F of the Development Agreement. Changes to the layout must be approved by County staff.

3. The turning radius at all corners shall be a minimum of 28-feet. Cul-de-sacs shall have a minimum driving surface radius of 50-feet.

4. Primary access roads throughout the site shall be kept clear of snow for emergency access.

5. Construction traffic shall access Red Bridge Road from the southwest entrance, directly from SR 970. If road closures along this access route occur, Public Works shall be consulted for a temporary detour route.

411 North Ruby Street, Suite 1
Ellensburg, WA 98926
TEL (509) 962-7523
FAX (509) 962-7663

6. The applicant shall prepare a Traffic Management Plan with the construction contractor outlining steps for minimizing construction traffic impacts. The Traffic Management Plan shall be submitted to the Department of Public Works and WSDOT prior to construction for review.

7. The applicant shall prepare a construction road signage plan for Red Bridge Road and Wiehl Road that conforms to the most recent edition of the Manual on Uniform Traffic Control Devices. The construction road signage plan shall be submitted to the Department of Public Works prior to construction for review.

8. The applicant shall provide notice by mail five days in advance to adjacent landowners when road construction takes place to help minimize access disruptions.

9. When slow or oversized wide loads are being hauled, appropriate vehicle and roadside signing and warning devices shall be deployed per the Traffic Management Plan. Pilot cars shall be used as WSDOT dictates, depending on load size and weight. WSDOT requirements shall also apply to county roads.

10. The applicant shall encourage carpooling for the construction workforce to reduce traffic volume.

11. The applicant shall provide detour and warning sign plans to the Department of Public Works in advance of any traffic disturbances. When temporary road closures cannot be avoided the applicant shall post "To Be Closed" signs and place a legal notice in the newspaper a minimum of five working days prior to the closing. The types and locations of the signs shall be shown on a detour plan. A detour plan must be prepared and submitted to the Department of Public Works at least ten working days in advance of the proposed closure, and approved prior to closing any County roadway. In addition, the contractor must notify, in writing, local fire, school, law enforcement authorities, postal service and any other affected persons as directed by the Department of Public Works at least five working days prior to the closing.

12. The applicant shall maintain one travel lane at all times when construction occurs or Loping Lane or Wiehl Road. A flagger shall be employed at all times when only one travel lane is open.

13. The applicant shall employ flaggers as necessary to direct traffic when large equipment is exiting or entering public roads to minimize risk of accidents.

14. The applicant shall provide a roadway pavement analysis and visually inspect the condition of pavement and the quantity and severity of pavement distresses utilizing a county approved rating system and a video, prior to and immediately after each phase of construction, including substation construction. The analysis shall document roadway and shoulder conditions before and after construction and shall include Red Bridge Road east of Wiehl Road and Teanaway Road north of Red Bridge Road. The applicant shall be responsible for restorative work made necessary by the project.

15. On-site stormwater management that conforms to the specifications of the most current version of the Stormwater Management Manual for Eastern Washington is required of this

development. Stormwater systems shall be designed to store stormwater generated by a 24-hour, 25-year storm event. Stormwater system designs shall be prepared and stamped by a civil engineer licensed in the State of Washington. The stormwater system design shall be presented to Public Works and approved by the County Engineer prior to permit issuance. The stormwater system construction shall be certified by a licensed engineer and is required prior to issuance of a building permit. Stormwater plans shall be submitted in accordance with KCC 12.06 and 12.08.

205 West 5th, Rm 108
Ellensburg, WA 98926

TEL (509) 962-7523
FAX (509) 962-7663

Anna Nelson

From: James Rivard [james.rivard@co.kittitas.wa.us]
Sent: Wednesday, June 23, 2010 1:57 PM
To: Anna Nelson
Subject: Teanaway Solar Reserve CUP

Hi Anna,

During construction the site must have adequate means to address the needs of the workforce bathroom facilities in the form of at least a sanitary porti-pody that is serviced by a septic pumper approved by the Kittitas county public health department and hand-washing facilities must be present and available for use, if these two items are not addressed State Labor and Industries Officials may be notified and applicable fines may be issued.

Post construction, if the applicant does not intend to have employees onsite then at this time the health department can only recommend that a water source and septic be available.

James Rivard
Environmental Health Supervisor
Kittitas County Public Health Department
507 N. Nanum St., Suite 102
Ellensburg, WA 98926
(509) 962-7005

message id: 38eb45916c6dcbdac24bb8719d004a14

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
15 W Yakima Ave, Ste 200 • Yakima, WA 98902-3452 • (509) 575-2490

July 1, 2010

Brittany Garton and Nichole Seidell
CH2M Hill
2020 Southwest 4th Avenue, 3rd Floor
Portland, OR 97201-4958

Dear Brittany and Nichole,

Thank you for giving the Washington State Department of Ecology (Ecology) the opportunity to review and comment on the Additional Information Submittal materials, which are added to the application for a Conditional Use Permit for the Teanaway Solar Reserve (TSR).

Doug Howie, Ecology stormwater engineer, prepared comments on the hydrologic analysis portion of the submittal, with accompanying spreadsheets (see attachments).

As you know, the *Teanaway Temperature TMDL* protects hyporheic recharge to the river in order to ensure adequate flows during the late summer/early fall low-flow period. We note that you intend to design and install best management practices (BMPs) that will "collect runoff from a developed area and release it at a slower rate than it would typically run off the site." What does "typically" mean here? Please be more specific in your description of BMPs to ensure that post-construction site hydrology will remain virtually unchanged from pre-construction site hydrology, which includes appropriate absorption of water into hillside soils during the wet times of the year.

Additionally, the October 5, 2009 letter from GeoEngineers states that the flows from the project site likely provided little of the water in the hyporheic zone, and that most of the water in the hyporheic zone comes from runoff captured from the proposed project site and used for agricultural purposes. We do not completely agree with this analysis, especially regarding the north basin. Saturated soils on hillslopes also have a substantial influence on hyporheic recharge.

Please respond to these comments through a letter addressing each comment, rather than producing another hydrologic analysis. Because a new report will be needed during the project design phase, it is not necessary to develop a new report at this time.

Feel free to contact me with any questions at 509-457-7107 or cmck461@ecy.wa.gov, or you can contact Jane Creech at 509-925-2557 or jton461@ecy.wa.gov.

Sincerely,

Charles McKinney

Charles McKinney
Section Manager
Water Quality Program

Attachments

cc: Dan Valoff, Kittitas County Community Development Services
Doug D'Hondt, Kittitas County Public Works
Jon Merz, WA Dept of Ecology
Lynda Jamison, WA Dept of Ecology
Doug Howie, WA Dept of Ecology
Jane Creech, WA Dept of Ecology

ATTACHMENT #1

Comments from Doug Howie (WA Dept of Ecology) on Teanaway Solar Reserve Hydrologic Analysis Kittitas County, Washington, June 2010, prepared by CH2M-Hill.

1. The proper name for the Department of Ecology (Ecology) stormwater manual is "Stormwater Management Manual for Eastern Washington (SWMMEW)" not "Eastern Washington Stormwater Management Manual". Please reference the correct name.
2. Please show the two basin boundaries on the Figure that shows the project boundary. It is difficult to see what part of drainage basin is the project site and what part is outside the project site.
3. I had difficulty confirming the developed CN from the tables you provided. Please show how the CNs of 73 and 76 were calculated.
4. The 3-hour storm should not use the "NRCS storm distribution Type IA" as stated in the second paragraph of section 5.0. Ecology developed and presented the 3-hour storm hyetograph in the SWMMEW. I ran the simulations using the correct 3-hour storm hyetograph and obtained higher peak flows than those shown in the report (see Attachment #2, *3-hour storm.pdf)*. The peak flows for the 3-hour storm are lower than those obtained in the longer rainfall simulations. Please use the correct hyetograph during the design process.
5. There is confusion with the 24-hour storm. The report references the NRCS Type IA storm and the "Regional Storm" as if they are the same thing. The NRCS Type IA storm is a 24-hour storm that has been developed for the western portion of Washington and Oregon. Rainfall amounts used in simulations of the Type IA storm are selected directly from precipitation maps. The "Regional Storm" for the Cle Elum area is a 36-hour storm and the hyetograph for the storm is shown in Table 4.2.5 of the SWMMEW. To use this storm you need to multiply the 24-hour rainfall by 1.16 to get the 36-hour rainfall.
6. As a result of the confusion, a simulation with the Type IA storm was run with a rainfall that is 16% higher than required. Thus, there appears to be a composite simulation of the rainfall for the 36-hour "Regional Storm" and the hyetograph for the NRCS Type IA storm. I ran an analysis with the Type IA storm with the increased rainfall and matched the numbers in the report (see Attachment #3, *Type IA CH_Ecol mult.pdf*).
7. If you run the analysis with either the Type IA storm and the correct 24-hour rainfall (see Attachment #4, *Type 1A CH mult_Ecol act.pdf*) or the Region 1 storm with the increased rainfall (see Attachment #5, *CH Type IA mult_Ecol regional mult.pdf*), the resulting peak flow rates are lower than the values in the report. Therefore, it appears the numbers in the report, while not strictly accurate, are conservative and indicate a larger impact than would be seen with either of the Type IA or Region 1 storm using the correct rainfall amount. Rainfall volumes are based on the amount of rainfall, and by using the increased rainfall for the analysis in the report shows a higher volume than would be seen when using the correct rainfall.

8. In various locations, text in the report shows the return event information (i.e. 10-year) for a storm but doesn't identify the length of the rainfall. Please use the full identification of the storm i.e. 10-year, 24-hour storm.
9. When the analysis is run during the design phase of the project, please use the NRCS Type IA storm with the correct rainfall amount.
10. In section 5.1, a reference is made to development of the "Stormwater Pollution Prevention Plan". In accordance with the SWMMEW, you are required to develop a "Stormwater Site Plan (SSP)" which includes analysis of both Construction and Permanent BMPs for the site. The SSP lists eight Core Elements that must be addressed and submitted to the local jurisdiction.
11. Please identify the units for the variables in the rain on snow equation on page 12.
12. In the Summary section the statement "stormwater BMPs will be implemented if necessary" appears. Stormwater BMPs of some type must be implemented on this project to provide water quality treatment and control runoff.
13. I did not find any problem with the analysis done by CH2M-Hill for rain on snow.

ATTACHMENT #2

3-hour storm.pdf

Peak Discharge calculated by Ecology (DCH) using HEC-HMS

Basin	2yr-3hr			10yr-3hr			100yr-3hr		
	Ecology Regional	CH2M	% Differ	Ecology Regional	CH2M	% Differ	Ecology Regional	CH2M	% Differ
Existing									
North	-	-	#DIV/0!	2.04	0.72	183.3%	33.60	24.71	36.0%
South	-	-	#DIV/0!	4.48	1.92	133.3%	82.41	58.90	39.9%
Proposed									
North	0.02	0.05	-60.0%	3.40	1.01	236.6%	37.44	29.40	27.3%
South	0.22	0.53	-58.5%	21.08	10.36	103.5%	125.33	109.23	14.7%
Increase									
North	0.02	0.05	-60.0%	1.36	0.29	369.0%	3.84	4.69	-18.1%
South	0.22	0.53	-58.5%	16.60	8.44	96.7%	42.92	50.33	-14.7%
Percent Increase									
North	#DIV/0!	#DIV/0!	#DIV/0!	66.7%	40.3%	65.5%	11.4%	19.0%	-39.8%
South	#DIV/0!	#DIV/0!	#DIV/0!	370.5%	439.6%	-15.7%	52.1%	85.4%	-39.1%

% Difference is based on (Ecology-CH2M-Hill)/CH2M-Hill

ATTACHMENT #3

Type IA CH_Ecol mult.pdf

Peak Discharge calculated by Ecology (DCH) using HEC-HMS
Ecology Uses Type IA storm with Regional Rainfall (1.16 multiplier)

Basin	10 yr Storm			25 yr Storm			100 yr Storm		
	Ecology Regional	CH2M	% Differ	Ecology Regional	CH2M	% Differ	Ecology Regional	CH2M	% Differ
Existing									
North	21.77	21.77	0.0%	39.85	39.85	0.0%	71.52	71.54	0.0%
South	55.98	55.96	0.0%	102.02	102.01	0.0%	183.87	183.89	0.0%
Proposed									
North	24.77	24.78	0.0%	43.75	43.77	0.0%	76.49	76.53	-0.1%
South	89.52	89.52	0.0%	144.33	144.34	0.0%	237.34	237.38	0.0%

% Difference is based on (Ecology-CH2M-Hill)/CH2M-Hill

CH2M-Hill used 1.16 times 24-hour storm rainfall and the Type 1A storm
Ecology used 1.16 times 24-hour storm rainfall and the Type 1A storm

ATTACHMENT #4

Type 1A CH mult_Ecol act.pdf

Peak Discharge calculated by Ecology (DCH) using HEC-HMS
Ecology Uses Type IA Storm

Basin	10 yr Storm			25 yr Storm			100 yr Storm		
	Ecology Regional	CH2M	% Differ	Ecology Regional	CH2M	% Differ	Ecology Regional	CH2M	% Differ
Existing									
North	11.62	21.77	-46.6%	24.58	39.85	-38.3%	49.19	71.54	-31.2%
South	30.43	55.96	-45.6%	63.16	102.01	-38.1%	125.76	183.89	-31.6%
Proposed									
North	13.89	24.78	-43.9%	27.85	43.77	-36.4%	53.41	76.53	-30.2%
South	56.43	89.52	-37.0%	98.36	144.34	-31.9%	170.07	237.38	-28.4%

% Difference is based on (Ecology-CH2M-Hill)/CH2M-Hill

CH2M-Hill used 1.16 times 24-hour storm rainfall with the Type 1A storm
Ecology used actual 24-hour rainfall (CH2M value/1.16)

ATTACHMENT #5

CH Type IA mult_Ecol regional mult.pdf

Peak Discharge calculated by Ecology (DCH) using HEC-HMS
Ecology Uses 36-hr Regional Storm

Basin	10 yr Storm			25 yr Storm			100 yr Storm		
	Ecology Regional	CH2M	% Differ	Ecology Regional	CH2M	% Differ	Ecology Regional	CH2M	% Differ
Existing									
North	15.27	21.77	-29.9%	25.19	39.85	-36.8%	41.96	71.54	-41.3%
South	40.32	55.96	-27.9%	66.66	102.01	-34.7%	111.50	183.89	-39.4%
Proposed									
North	16.84	24.78	-32.0%	27.09	43.77	-38.1%	44.29	76.53	-42.1%
South	57.86	89.52	-35.4%	87.84	144.34	-39.1%	137.11	237.38	-42.2%

% Difference is based on (Ecology-CH2M-Hill)/CH2M-Hill

CH2M-Hill used 1.16 times 24-hour storm rainfall with the Type 1A storm
Ecology used CH2M rainfall value and the Regional Storm hyetograph

Linda Brown

From: Anna Nelson
Sent: Thursday, July 08, 2010 7:26 AM
To: Linda Brown
Subject: FW: Teanaway Solar Reserve (TSR) Tecnnical Advisory Committee (TAC) Tree Count
Attachments: TsrTacTreecount.pdf

Pls print

From: Teske, Mark S (DFW) [mailto:Mark.Teske@dfw.wa.gov]
Sent: Wednesday, July 07, 2010 6:11 PM
To: Nichole.Seidell@ch2m.com; Anna Nelson; Larsen, Brenda (DOHi); kirk.holmes@co.kittitas.wa.us; howard@sawtoothdg.com; jjones@forestllc.com; Jay.Lorenz@ch2m.com; marc.eylar@co.kittitas.wa.us; MattS@strategies360.com; MAUNEY, MARTY (DNR); Meyer, William R (DFW); Nelson, Travis W (DFW)
Subject: Teanaway Solar Reserve (TSR) Tecnnical Advisory Committee (TAC) Tree Count

State of Washington
Department of Fish and Wildlife
South Central Region – Ellensburg District Office, 201 North Pearl, Ellensburg, WA 98926
Phone: (509) 962-3421, Fax (509) 925-4702

July 7, 2010

Ms. Anna Nelson
Kittitas County
Community Development Services
411 N Ruby ST, Suite 2
Ellensburg, WA 98926

Dear Ms. Nelson:

At the most recent Teanaway Solar Reserve (TSR) Technical Advisory Committee (TAC) meeting, Jeff Jones provided a breakdown of the number of trees, by diameter class, that currently grow in the areas that will be occupied by the TSR infrastructure.

WDFW's understanding of the role of the TAC was that the group was to develop a credible tree planting plan that would replace trees removed by the development at a 3 to 1 ratio. The TAC had been operating with the number 13,000 as the number of trees that would be removed by the development. Those 13,000 trees multiplied by 3 came to 39,000 trees. The TAC was to develop a re-vegetation plan (techniques and locations) for that number of trees.

However, in the diameter class breakdown that resulted from the vegetation plots that counted the trees, the 0 to 3 inch tree diameter category was not included when the 13,000 tree number was generated. This was new information. Failing to include the 0 to 3 inch tree size category ignores a significant number of trees. This size class is the exact same size category that will be planted to replace the trees removed by development of the TSR. No satisfactory explanation was offered as to why that tree diameter category would not be considered a tree when counting trees, but would be considered a tree when replanting trees. Remember, numerous large diameter trees will be removed for this development. Replacing one 16" inch diameter tree with three (3) seedlings that are not even an inch in diameter is not remotely proportional. To then undercount the total number of trees to this degree or to declassify as trees whole diameter classes appears arbitrary. This issue needs to be resolved prior to the completion of the re-vegetation plan.

Sincerely,

Mark S. Teske

Mark S. Teske, WDFW Habitat

cc: Perry Harvester, WDFW Region 3 Habitat Program Manager

Anna Nelson

From: Mandy Weed [mandy.weed@co.kittitas.wa.us] on behalf of CDS User [planning@co.kittitas.wa.us]
Sent: Monday, July 19, 2010 2:53 PM
To: Dan Valoff; Anna Nelson
Subject: FW: Teanaway Solar Reserve

Mandy Weed

-----Original Message-----
From: lee bates [mailto:bateslee@eburg.com]
Sent: Monday, July 19, 2010 2:34 PM
To: CDS User
Subject: Teanaway Solar Reserve

I recommend you disapprove the Conditional Use permit for the Teanaway Solar reserve for environmental reasons. The location is not suitable.
It should be located in a non used area like Whiskey Dick where people do not have to look at it every day. It is out of place. The amount of electricity generated is miniscue. The payback period is too great.
People are trying to get rich on going green on taxpayer subsidies. It is a waste of taxpayer money.

Lee Bates
PO Box 1666
Ellensburg WA 98926
509 925 5055
bateslee@eburg.com
7-18-10

message id: 38eb45916c6dcbdac24bb8719d004a14

Anna Nelson

From: Mandy Weed [mandy.weed@co.kittitas.wa.us] on behalf of CDS User [planning@co.kittitas.wa.us]
Sent: Monday, July 26, 2010 8:34 AM
To: Dan Valoff; Anna Nelson
Subject: FW: Teanaway

Mandy Weed

-----Original Message-----
From: barry leaf [mailto:barryleaf@gmail.com]
Sent: Sunday, July 25, 2010 2:46 PM
To: CDS User
Subject: Teanaway

Save our teanaway.

Sent from my iPhone

message id: 38eb45916c6dcbdac24bb8719d004a14

Anna Nelson

From: Mandy Weed [mandy.weed@co.kittitas.wa.us] on behalf of CDS User [planning@co.kittitas.wa.us]
Sent: Monday, July 26, 2010 8:34 AM
To: Dan Valoff; Anna Nelson
Subject: FW: Help
Attachments: photo.JPG; ATT00001.txt

Mandy Weed

-----Original Message-----
From: barry leaf [mailto:barryleaf@gmail.com]
Sent: Sunday, July 25, 2010 2:47 PM
To: CDS User
Subject: Help

message id: 38eb45916c6dcbdac24bb8719d004a14

Say No to the Teanaway Solar Reserve

Anna Nelson

From: Mandy Weed [mandy.weed@co.kittitas.wa.us] on behalf of CDS User [planning@co.kittitas.wa.us]
Sent: Wednesday, July 28, 2010 8:15 AM
To: Dan Valoff; Anna Nelson
Subject: FW: Teanaway Solar Reserve

Mandy Weed

From: Mike Zahajko [mailto:mzahajko@alliancemarketing.net]
Sent: Tuesday, July 27, 2010 5:14 PM
To: CDS User
Cc: 'Mike Zahajko'
Subject: Teanaway Solar Reserve

My name is Mike Zahajko, I am a ***homeowner*** at 760 Weihl Rd, Cle Elum, WA 98922 and directly adjacent to the proposed Teanaway Solar Reserve (TSR).

I am writing this plea as a ***home owner*** and ***concerned citizen*** for the pending violation to allow TSR to complete the proposed solar installation project on the Cle Elum Ridge.

I emphatically disagree with this site selection on the following bases:

(1) this Cle Elum Ridge area is beautiful forest area, that would be desecrated by the proposed solar installations.

(2) I'm a supporter of alternative even specifically -- solar energy. However, I fell there is better suited vacant and dessert landscape acreage (without greenery) in other parts of eastern Kittitas County; with lower environmental and (residential) neighborhood impact.

(3) this project cannot be completed without compromising SAFETY to people and property: This Cle Elum Ridge is a high fire danger area; with only one (Weihl Rd) evacuation route. Weihl Rd is not suitable for heavy-equipment and machinery traffic TSR will bring to the area and additional transportation concerns therein.

(4) the current proposed TSR is positioned to be an eye-sore to immediate adjacent neighbors; as well a vastly more significant population with visible of TSR areas.

(5) the TSR will bring unwanted "industry" to this Cle Elum Ridge (forest) area. I am told that there will be up to 400,000 solar panels, 75 inverter buildings and hundreds if not thousands of workers required to construct and service TSR operations.

(6) the County is errant in the necessary (and required) due diligence to access the immediate and long-term environmental impact of the TSR.

(7) I moved to 760 Weihl Rd for the rural beauty and large open spaces – I personally take frequent walks in the exact area of the proposed TSR.

(8) I cannot imagine that this Cle Elum Ridge area is the "best use" for a ""SOLAR INSTALLATION"" perhaps if the out-of-state (East Coast) investors lived here they too would agree...

(9) I fully support **Citizens Alliance for a Rural Teanaway** opposing any current or future development by TSR in the Cle Elum Ridge area.

As our County representatives – please DO NOT ALLOW TSR to rollover Kittitas County with the prospect of a few new jobs while we sacrifice our natural resources right here in Cle Elum off Weihl Rd!

This is crazy – please help…

Regards,
Mike Zahajko

(206) 660-4715 | (206) 374-8209 f
mzahajko@alliancemarketing.net

message id: 38eb45916c6dcbdac24bb8719d004a14

Anna Nelson

From: Nichole.Seidell@ch2m.com
Sent: Friday, July 30, 2010 3:46 PM
To: Anna Nelson
Subject: FW: Teanaway Solar Reserve- Phone Call on July 29, 2010

From: Howie, Douglas (ECY) [mailto:doho461@ECY.WA.GOV]
Sent: Friday, July 30, 2010 7:56 AM
To: Seidell, Nichole/PDX
Cc: Creech, Jane T. (ECY); McKinney, Charlie (ECY)
Subject: RE: Teanaway Solar Reserve- Phone Call on July 29, 2010

Nicole:

I agree with the description of what is needed for the final design for the Teanaway Project stormwater treatment and control facilities that you provide in the text below. Please work with your client to ensure that this requirement is presented to the people who are doing the final design and that the final design must be in compliance with the Stormwater Management Manual of Eastern Washington.

Thank you for making time available to discuss this issue.

Douglas C. Howie, P.E.
Stormwater Engineer
Department of Ecology, Water Quality Section
300 Desmond Dr. SE; PO Box 47600
Olympia, WA 98504-7600
(360) 407-6444 (voice)
douglas.howie@ecy.wa.gov

From: Nichole.Seidell@ch2m.com [mailto:Nichole.Seidell@ch2m.com]
Sent: Thursday, July 29, 2010 4:47 PM
To: Howie, Douglas (ECY)
Cc: Creech, Jane T. (ECY); McKinney, Charlie (ECY)
Subject: Teanaway Solar Reserve- Phone Call on July 29, 2010

Hi Doug,

Thanks for taking the time to talk with us today regarding the Teanaway Project.

Per our discussion today, we concur that design of any facilities to manage water quantity or quality on the site must accommodate all drainage from the contributing basin, including those areas not within the project site, either by appropriately sized facilities onsite or conveyance around the project.

Again, we appreciate you taking the time to provide such a thorough review.

Please give me a call if you have any questions!

Nichole Seidell
CH2M HILL
2020 SW Fourth Ave
Portland, OR 97201
503.329.2543 (cell)
503.872.4803 (office)
503.736.2000 (fax)
nseidell@ch2m.com

Anna Nelson

From: Anna Nelson
Sent: Monday, July 26, 2010 1:22 PM
To: Valoff, Dan; D'Hondt, Douglas P.; Wollman, Christina; Holmes, Kirk
Subject: FW: e-Copy: Correspondence sent on behalf of WA State Dept. of Ecology
Attachments: TSR_Comment_Response_Letter_07_26_10_final.pdf

From: Nichole.Seidell@ch2m.com [mailto:Nichole.Seidell@ch2m.com]
Sent: Monday, July 26, 2010 1:19 PM
To: Anna Nelson
Subject: FW: e-Copy: Correspondence sent on behalf of WA State Dept. of Ecology

For your files.

From: Seidell, Nichole/PDX
Sent: Monday, July 26, 2010 1:18 PM
To: 'Creech, Jane T. (ECY)'
Cc: McKinney, Charlie (ECY); Jamison, Lynda (ECY); Merz, Jonathan (ECY); Howie, Douglas (ECY); Espinoza, Joy (ECY); Garton, Brittany/PDX; Anderson, Mark/PDX
Subject: RE: e-Copy: Correspondence sent on behalf of WA State Dept. of Ecology

Hi Jane,

Thanks for taking the time to provide these comments. Attached please find the responses on behalf of TSR.

Please call me if you have any questions.

Nichole Seidell
CH2M HILL
2020 SW Fourth Ave
Portland, OR 97201
503.329.2543 (cell)
503.872.4803 (office)
503.736.2000 (fax)
nseidell@ch2m.com

From: Creech, Jane T. (ECY) [mailto:JTON461@ECY.WA.GOV]
Sent: Thursday, July 01, 2010 2:46 PM
To: Seidell, Nichole/PDX
Cc: McKinney, Charlie (ECY); Jamison, Lynda (ECY); Merz, Jonathan (ECY); Howie, Douglas (ECY); Espinoza, Joy (ECY); Garton, Brittany/PDX
Subject: RE: e-Copy: Correspondence sent on behalf of WA State Dept. of Ecology

Hi Nichole,

Thanks for the note. I added answers within your note below.

Please contact me if I can help with anything.

Have a great day,
Jane

Jane Creech
WA Dept of Ecology
Water Quality/Central Region
509-925-2557
jane.creech@ecy.wa.gov

From: Nichole.Seidell@ch2m.com [mailto:Nichole.Seidell@ch2m.com]
Sent: Thursday, July 01, 2010 2:31 PM
To: Espinoza, Joy (ECY); Brittany.Garton@CH2M.com
Cc: Creech, Jane T. (ECY); McKinney, Charlie (ECY); Jamison, Lynda (ECY); Merz, Jonathan (ECY); Howie, Douglas (ECY)
Subject: RE: e-Copy: Correspondence sent on behalf of WA State Dept. of Ecology

Thank you all for taking the time to provide us with this input. For clarification, do you want us to respond to the items detailed in the letter and the 13 items outlined in the attachment? Yes, please.

Can we respond to all items via a brief letter? Sure, as long as (1) you do respond to all comments and (2) the responses fully address the items (especially Doug's questions, where he requests a couple of additional calculations).

Just wanted to be sure expectations are clear and we are getting you what you find most useful.

Thanks!

From: Espinoza, Joy (ECY) [mailto:jesp461@ECY.WA.GOV]
Sent: Thursday, July 01, 2010 1:39 PM
To: Garton, Brittany/PDX; Seidell, Nichole/PDX
Cc: Creech, Jane T. (ECY); McKinney, Charlie (ECY); Jamison, Lynda (ECY); Merz, Jonathan (ECY); Howie, Douglas (ECY)
Subject: e-Copy: Correspondence sent on behalf of WA State Dept. of Ecology

Good afternoon,

Attached please find your electronic copy of correspondence sent on behalf of WA State Department of Ecology, Water Quality Program. Should you have any questions, please feel free to contact either Charles McKinney, Section Manager at 509/457-7107 or Jane Creech, TMDL Coordinator at 509/925-2557.

Thank you,

Joy Espinoza
Secretary for the Water Quality Program
Department of Ecology - Central
509-454-7888

CH2MHILL

July 26, 2010

Charles McKinney
15 W Yakima Ave, Ste 200
Yakima, WA 98902-3452

Subject: Response to Department of Ecology Comments Provided on the Additional Submittal Materials Teanaway Solar Project Hydrologic Analysis

Dear Charlie,

Thank you for giving CH2M HILL the opportunity to respond to the comments the Department of Ecology (Ecology) provided on July 1, 2010 regarding the Additional Information Submittal materials, which supplemented the application for a Conditional Use Permit for the Teanaway Solar Reserve (TSR) (Attachment 1). As requested, responses are provided below to each individual comment that was provided by Ecology. Comments are numbered, with responses written in italics following each comment.

1. The proper name for the Department of Ecology (Ecology) stormwater manual is "Stormwater Management Manual for Eastern Washington (SWMMEW)" not "Eastern Washington Stormwater Management Manual." Please reference the correct name.

All references made to the "Eastern Washington Stormwater Management Manual" in the Teanaway Solar Reserve Hydrologic Analysis from June 2010 are meant to reference the Stormwater Management Manual for Eastern Washington. In future reports and analyses, the proper name for the document will be used.

2. Please show the two basin boundaries on the Figure that shows the project boundary. It is difficult to see what part of drainage basin is the project site and what part is outside the project site.

The proposed project site is defined at 477 acres, and the project area is 982 acres. The North drainage basin encompasses 259 acres, of the project area and the South drainage basin encompasses the remaining 723 acres. The basins within the project area are illustrated in purple and blue on Figure 3 (see attached).

3. I had difficulty confirming the developed CN from the tables you provided. Please show how the CNs of 73 and 76 were calculated.

The CNs developed for the project were based on hydrologic soil group and vegetative cover type from Technical Release 55: Urban Hydrology for Small Watersheds (NRCS,1986). All soils within the project area are in hydrologic soil group C. The woods-grass combination was used to determine the

existing curve number for the site. The existing site's CN of 72 was computed for an area with 50 percent woods and 50 percent grass (pasture) cover in good condition. Tables 1 and 2 tables included below show the numbers used as a basis for calculating the composite CN for existing and proposed conditions.

Table 1: Curve Number Calculations for Existing Conditions

Drainage Basin	Vegetated Cover Classification	Area (ac)	Curve Number Used
North Drainage Basin			
	Herbaceous Wetlands	0.59	100
	Open Water	0.03	100
	Ponderosa Pine Forest and Woodlands	258.39	72
	Composite Curve Number		**72**
South Drainage Basin			
	Herbaceous Wetlands	0.07	100
	Open Water	0.78	100
	Ponderosa Pine Forest and Woodlands	707.72	72
	Riparian	13.00	74
	Upland Aspen	1.42	41
	Composite Curve Number		**72**

Table 2: Curve Number Calculations for Proposed Conditions

Drainage Basin	Vegetated Cover Classification	Area (ac)	Curve Number Used
North Drainage Basin			
	Natural Site Conditions (50% woods, 50% grass)	212.16	72
	Roads (Gravel)	2.55	89
	Impervious Area	0.06	98
	Grassland in Fair Condition (Array Field)	44.23	79
	Composite Curve Number		**73**
South Drainage Basin			
	Natural Site Conditions (50% woods, 50% grass)	347.88	72
	Roads and Substation Area (Gravel)	19.54	89
	Impervious Area	0.81	98
	Grassland in Fair Condition (Array Field)	354.77	79
	Composite Curve Number		**76**

4. The 3-hour storm should not use the "NRCS storm distribution Type IA" as stated in the second paragraph of section 5.0. Ecology developed and presented the 3-hour storm hyetograph in the SWMMEW. I ran the simulations using the correct 3-hour storm

hyetograph and obtained higher peak flows than those shown in the report (see Attachment 2, 3-hour storm.pdf). The peak flows for the 3-hour storm are lower than those obtained in the longer rainfall simulations. Please use the correct hyetograph during the design process.

CH2M HILL received guidance on the 3-hour storm calculations from Ecology during the period between the first submittal of the Hydrologic Report (February 2010) and the updated submittal of the Hydrologic Report (June 2010). The Hydrologic Report (June 2010) misstates the storm distribution used. The design storm distribution that was used was the 3-hour short duration storm distribution as shown in the Stormwater Management Manual for Eastern Washington. The correct hyetograph, as referenced in the SWMMEW, will be applied during the design process.

5. There is confusion with the 24-hour storm. The report references the NRCS Type IA storm and the "Regional Storm" as if they are the same thing. The NRCS Type IA storm is a 24-hour storm that has been developed for the western portion of Washington and Oregon. Rainfall amounts used in simulations of the Type IA storm are selected directly from precipitation maps. The "Regional Storm" for the Cle Elum area is a 36-hour storm and the hyetograph for the storm is shown in Table 4.2.5 of the SWMMEW. To use this storm you need to multiply the 24-hour rainfall by 1.16 to get the 36-hour rainfall.

CH2M HILL discussed this issue with Doug Howie at Ecology on June 18th, 2010. What is referred to as the regional storm event in the Hydrologic Analysis (June 2010) is in fact an NRCS Type 1A storm with precipitation depths 16% higher than required. CH2M HILL agrees with Doug that by utilizing the methodology presented in the report, the numbers presented in the report, are more conservative than they would have been if either the NRCS Type 1A or Regional Storm methods were used. CH2M HILL notes that in future analyses and reports, the NRCS Type 1A storm will be used with the required precipitation depths from the isopluvial maps (not increased by 16%), and the correct storm name will be referenced.

6. As a result of the confusion, a simulation with the Type IA storm was run with a rainfall that is 16% higher than required. Thus, there appears to be a composite simulation of the rainfall for the 36-hour "Regional Storm" and the hyetograph for the NRCS Type IA storm. I ran an analysis with the Type IA storm with the increased rainfall and matched the numbers in the report (see Attachment 3, Type IA CH_Ecol mult.pdf).

See response to comment #5.

7. If you run the analysis with either the Type IA storm and the correct 24-hour rainfall (see Attachment 4, Type 1A CH mult_Ecol act.pdf) or the Region 1 storm with the increased rainfall (see Attachment 5, CH Type IA mult_Ecol regional mult.pdf), the resulting peak flow rates are lower than the values in the report. Therefore, it appears the numbers in the report, while not strictly accurate, are conservative and indicate a larger impact than would be seen with either of the Type IA or Region 1 storm using the correct rainfall amount.

Rainfall volumes are based on the amount of rainfall, and by using the increased rainfall for the analysis in the report shows a higher volume than would be seen when using the correct rainfall.

See response to comment #5.

8. In various locations, text in the report shows the return event information (i.e. 10-year) for a storm but doesn't identify the length of the rainfall. Please use the full identification of the storm i.e. 10-year, 24-hour storm.

In future reports and analyses, the full identification of the storm (i.e. 10-year, 24-hour storm) will be used.

9. When the analysis is run during the design phase of the project, please use the NRCS Type IA storm with the correct rainfall amount.

See response to comment #5.

10. In section 5.1, a reference is made to development of the "Stormwater Pollution Prevention Plan". In accordance with the SWMMEW, you are required to develop a "Stormwater Site Plan (SSP)" which includes analysis of both Construction and Permanent BMPs for the site. The SSP lists eight Core Elements that must be addressed and submitted to the local jurisdiction.

CH2M HILL notes that a Stormwater Site Plan will need to be developed and submitted to Ecology for approval prior to development and as a part of the permitting process for the project. The Stormwater Site Plan will be used to demonstrate compliance with the applicable core elements and developed as outlined in the Stormwater Management Manual for Eastern Washington.

11. Please identify the units for the variables in the rain on snow equation on page 12.

The units are as follows:

P = Precipitation (measured in inches)
I= Impervious Fraction
R= Runoff (measured in inches)

12. In the Summary section the statement "stormwater BMPs will be implemented if necessary" appears. Stormwater BMPs of some type must be implemented on this project to provide water quality treatment and control runoff.

BMPs will be implemented on this project to control runoff as stipulated by the local and state regulatory authorities. Specific stormwater BMPs will be chosen based on site-specific conditions during design and on their ability to function with and protect the natural watershed. Specific BMPs will be outlined in the National Pollutant Discharge Elimination System (NPDES) permit and the Stormwater Pollution PreventionSite Plan (SWPPP) also referred to as a Stormwater Site Plan that will be submitted for approval to the Washington State Department of Ecology prior to construction of the project.

13. I did not find any problem with the analysis done by CH2M-Hill for rain on snow.

Noted.

14. As you know, the Teanaway Temperature TMDL protects hyporheic recharge to the river in order to ensure adequate flows during the late summer/early fall low-flow period. We note that you intend to design and install best management practices (BMPs) that will "collect runoff from a developed area and release it at a slower rate than it would typically run off the site". What does "typically" mean here?

The intent of the statement was to establish the preference of infiltration and retention BMPs rather than a "typical" detention-style system that may match pre-project peak release rates but provide limited protection of hyporheic discharge. Infiltration and retention BMPs may also alleviate existing flood risks to downbasin landowners.

15. Please be more specific in your description of BMPs to ensure that post-construction site hydrology will remain virtually unchanged from per-construction site hydrology, which includes appropriate absorption of water into hillside soils during wet times of the year.

See response to comment #12.

16. Additionally, the October 5th, 2009 letter from GeoEngineers states that the flows from the project site likely provided little of the water in the hyporheic zone, and that most of the water in the hyporheic zone comes from runoff captured from the proposed project site and is used for agricultural purposes. We do not completely agree with this analysis, especially regarding the north basin. Saturated soils on hillslopes also have a substantial influence on hyporheic recharge.

Comment noted. Please note that the GeoEngineers letter was referenced only for purposes of interviews conducted regarding the January 2009 flood event. No part of the GeoEngineers letter was used to develop the hydrologic analysis presented in the CH2M HILL June 2, 2010 report.

Feel free to contact me with any questions at 503-872-4803 or nichole.seidell@ch2m.com. Thanks again for the opportunity to provide responses to comment

Sincerely,

CH2M HILL

N Seidell

Nichole Seidell
Project Manager

c: Jane Creech
Douglas Howie

ATTACHMENT #1

Comments from Doug Howie (WA Dept of Ecology) on Teanaway Solar Reserve Hydrologic Analysis Kittitas County, Washington, June 2010, prepared by CH2M-Hill.

1. The proper name for the Department of Ecology (Ecology) stormwater manual is "Stormwater Management Manual for Eastern Washington (SWMMEW)" not "Eastern Washington Stormwater Management Manual". Please reference the correct name.
2. Please show the two basin boundaries on the Figure that shows the project boundary. It is difficult to see what part of drainage basin is the project site and what part is outside the project site.
3. I had difficulty confirming the developed CN from the tables you provided. Please show how the CNs of 73 and 76 were calculated.
4. The 3-hour storm should not use the "NRCS storm distribution Type IA" as stated in the second paragraph of section 5.0. Ecology developed and presented the 3-hour storm hyetograph in the SWMMEW. I ran the simulations using the correct 3-hour storm hyetograph and obtained higher peak flows than those shown in the report (see Attachment #2, *3-hour storm.pdf)*. The peak flows for the 3-hour storm are lower than those obtained in the longer rainfall simulations. Please use the correct hyetograph during the design process.
5. There is confusion with the 24-hour storm. The report references the NRCS Type IA storm and the "Regional Storm" as if they are the same thing. The NRCS Type IA storm is a 24-hour storm that has been developed for the western portion of Washington and Oregon. Rainfall amounts used in simulations of the Type IA storm are selected directly from precipitation maps. The "Regional Storm" for the Cle Elum area is a 36-hour storm and the hyetograph for the storm is shown in Table 4.2.5 of the SWMMEW. To use this storm you need to multiply the 24-hour rainfall by 1.16 to get the 36-hour rainfall.
6. As a result of the confusion, a simulation with the Type IA storm was run with a rainfall that is 16% higher than required. Thus, there appears to be a composite simulation of the rainfall for the 36-hour "Regional Storm" and the hyetograph for the NRCS Type IA storm. I ran an analysis with the Type IA storm with the increased rainfall and matched the numbers in the report (see Attachment #3, *Type IA CH_Ecol mult.pdf*).
7. If you run the analysis with either the Type IA storm and the correct 24-hour rainfall (see Attachment #4, *Type 1A CH mult_Ecol act.pdf*) or the Region 1 storm with the increased rainfall (see Attachment #5, *CH Type IA mult_Ecol regional mult.pdf*), the resulting peak flow rates are lower than the values in the report. Therefore, it appears the numbers in the report, while not strictly accurate, are conservative and indicate a larger impact than would be seen with either of the Type IA or Region 1 storm using the correct rainfall amount. Rainfall volumes are based on the amount of rainfall, and by using the increased rainfall for the analysis in the report shows a higher volume than would be seen when using the correct rainfall.

8. In various locations, text in the report shows the return event information (i.e. 10-year) for a storm but doesn't identify the length of the rainfall. Please use the full identification of the storm i.e. 10-year, 24-hour storm.
9. When the analysis is run during the design phase of the project, please use the NRCS Type IA storm with the correct rainfall amount.
10. In section 5.1, a reference is made to development of the "Stormwater Pollution Prevention Plan". In accordance with the SWMMEW, you are required to develop a "Stormwater Site Plan (SSP)" which includes analysis of both Construction and Permanent BMPs for the site. The SSP lists eight Core Elements that must be addressed and submitted to the local jurisdiction.
11. Please identify the units for the variables in the rain on snow equation on page 12.
12. In the Summary section the statement "stormwater BMPs will be implemented if necessary" appears. Stormwater BMPs of some type must be implemented on this project to provide water quality treatment and control runoff.
13. I did not find any problem with the analysis done by CH2M-Hill for rain on snow.

ATTACHMENT #2

3-hour storm.pdf

Peak Discharge calculated by Ecology (DCH) using HEC-HMS

Basin	2yr-3hr			10yr-3hr			100yr-3hr		
	Ecology Regional	CH2M	% Differ	Ecology Regional	CH2M	% Differ	Ecology Regional	CH2M	% Differ
Existing									
North	-	-	#DIV/0!	2.04	0.72	183.3%	33.60	24.71	36.0%
South	-	-	#DIV/0!	4.48	1.92	133.3%	82.41	58.90	39.9%
Proposed									
North	0.02	0.05	-60.0%	3.40	1.01	236.6%	37.44	29.40	27.3%
South	0.22	0.53	-58.5%	21.08	10.36	103.5%	125.33	109.23	14.7%
Increase									
North	0.02	0.05	-60.0%	1.36	0.29	369.0%	3.84	4.69	-18.1%
South	0.22	0.53	-58.5%	16.60	8.44	96.7%	42.92	50.33	-14.7%
Percent Increase									
North	#DIV/0!	#DIV/0!	#DIV/0!	66.7%	40.3%	65.5%	11.4%	19.0%	-39.8%
South	#DIV/0!	#DIV/0!	#DIV/0!	370.5%	439.6%	-15.7%	52.1%	85.4%	-39.1%

% Difference is based on (Ecology-CH2M-Hill)/CH2M-Hill

ATTACHMENT #3

Type IA CH_Ecol mult.pdf

Peak Discharge calculated by Ecology (DCH) using HEC-HMS
Ecology Uses Type IA storm with Regional Rainfall (1.16 multiplier)

Basin	10 yr Storm			25 yr Storm			100 yr Storm		
	Ecology Regional	CH2M	% Differ	Ecology Regional	CH2M	% Differ	Ecology Regional	CH2M	% Differ
Existing									
North	21.77	21.77	0.0%	39.85	39.85	0.0%	71.52	71.54	0.0%
South	55.98	55.96	0.0%	102.02	102.01	0.0%	183.87	183.89	0.0%
Proposed									
North	24.77	24.78	0.0%	43.75	43.77	0.0%	76.49	76.53	-0.1%
South	89.52	89.52	0.0%	144.33	144.34	0.0%	237.34	237.38	0.0%

% Difference is based on (Ecology-CH2M-Hill)/CH2M-Hill

CH2M-Hill used 1.16 times 24-hour storm rainfall and the Type 1A storm
Ecology used 1.16 times 24-hour storm rainfall and the Type 1A storm

ATTACHMENT #4

Type 1A CH mult_Ecol act.pdf

Peak Discharge calculated by Ecology (DCH) using HEC-HMS
Ecology Uses Type IA Storm

Basin	10 yr Storm			25 yr Storm			100 yr Storm		
	Ecology Regional	CH2M	% Differ	Ecology Regional	CH2M	% Differ	Ecology Regional	CH2M	% Differ
Existing									
North	11.62	21.77	-46.6%	24.58	39.85	-38.3%	49.19	71.54	-31.2%
South	30.43	55.96	-45.6%	63.16	102.01	-38.1%	125.76	183.89	-31.6%
Proposed									
North	13.89	24.78	-43.9%	27.85	43.77	-36.4%	53.41	76.53	-30.2%
South	56.43	89.52	-37.0%	98.36	144.34	-31.9%	170.07	237.38	-28.4%

% Difference is based on (Ecology-CH2M-Hill)/CH2M-Hill

CH2M-Hill used 1.16 times 24-hour storm rainfall with the Type 1A storm
Ecology used actual 24-hour rainfall (CH2M value/1.16)

ATTACHMENT #5

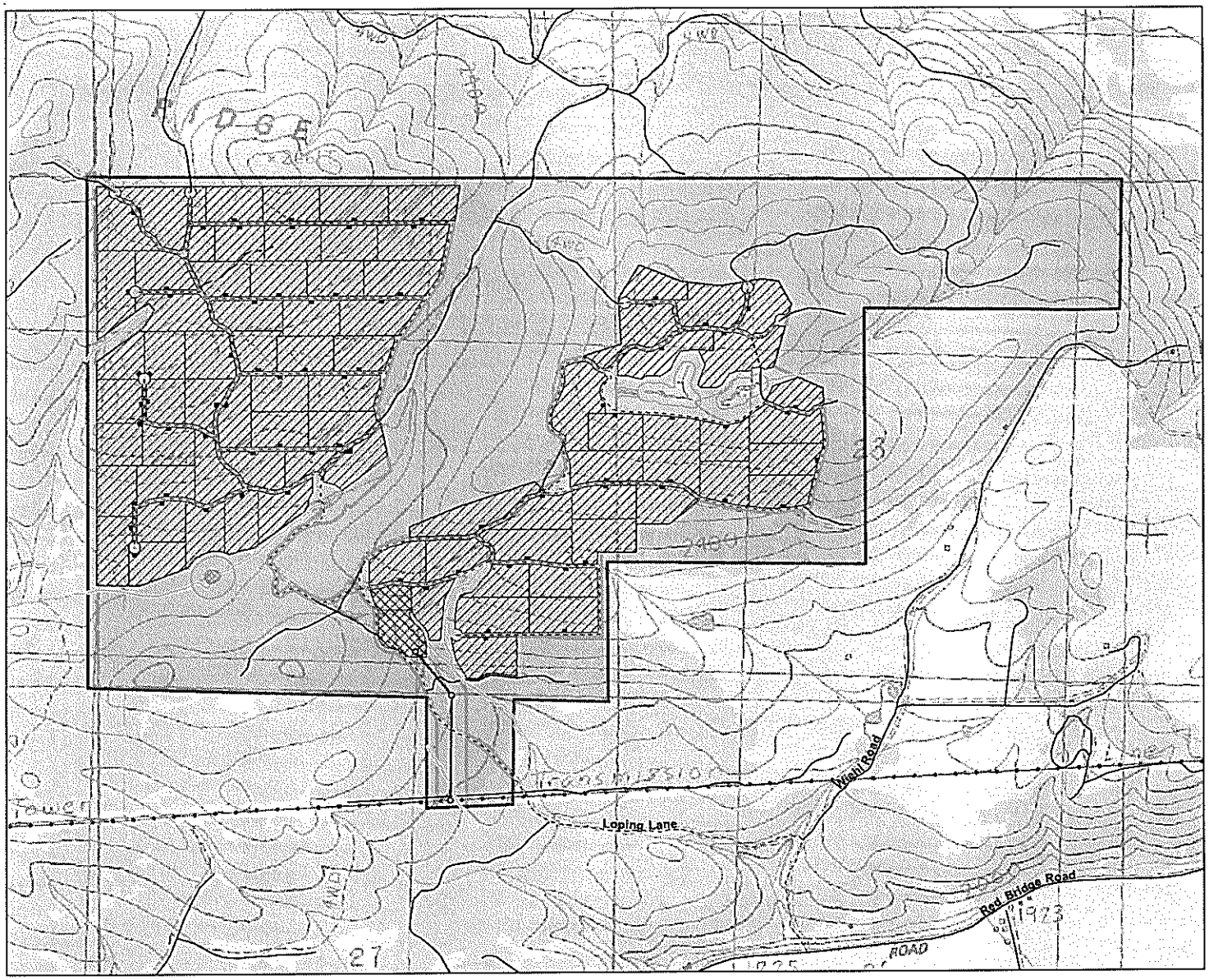
CH Type IA mult_Ecol regional mult.pdf

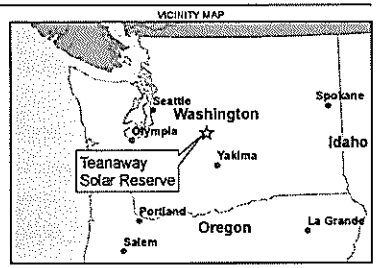
Peak Discharge calculated by Ecology (DCH) using HEC-HMS
Ecology Uses 36-hr Regional Storm

Basin	10 yr Storm			25 yr Storm			100 yr Storm		
	Ecology Regional	CH2M	% Differ	Ecology Regional	CH2M	% Differ	Ecology Regional	CH2M	% Differ
Existing									
North	15.27	21.77	-29.9%	25.19	39.85	-36.8%	41.96	71.54	-41.3%
South	40.32	55.96	-27.9%	66.66	102.01	-34.7%	111.50	183.89	-39.4%
Proposed									
North	16.84	24.78	-32.0%	27.09	43.77	-38.1%	44.29	76.53	-42.1%
South	57.86	89.52	-35.4%	87.84	144.34	-39.1%	137.11	237.38	-42.2%

% Difference is based on (Ecology-CH2M-Hill)/CH2M-Hill

CH2M-Hill used 1.16 times 24-hour storm rainfall with the Type 1A storm
Ecology used CH2M rainfall value and the Regional Storm hyetograph





LEGEND

Proposed Project Features

- Proposed Project Area (982 Acres)
- Proposed Project Site (477 acres)
- Proposed PV Array Block
- Proposed Field Inverter and Field Transformer
- Proposed Substation/O&M Facility
- Proposed Transmission Line
- Proposed Transmission Structure
- Primary Access Road
- Secondary Access Road
- Proposed Improved Existing County Access Road
- Proposed Improved Existing Private Access Road
- Existing Maintenance Road (Planned Decommissioning)

Existing Features

- Existing BPA Transmission Line and ROW
- Existing Road
- Stream
- Stream Buffer
- Wetland
- Wetland Buffer
- South Drainage Basin
- North Drainage Basin

N

0 1,000 Feet

1 inch = 1,000 feet

FIGURE 3
Proposed Site Layout with Drainage Basins
Hydrologic Analysis
Teanaway Solar Reserve
Kittitas County, Washington

CH2MHILL

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
15 W Yakima Ave, Ste 200 • Yakima, WA 98902-3452 • (509) 575-2490

July 1, 2010

Brittany Garton and Nichole Seidell
CH2M Hill
2020 Southwest 4th Avenue, 3rd Floor
Portland, OR 97201-4958

Dear Brittany and Nichole,

Thank you for giving the Washington State Department of Ecology (Ecology) the opportunity to review and comment on the Additional Information Submittal materials, which are added to the application for a Conditional Use Permit for the Teanaway Solar Reserve (TSR).

Doug Howie, Ecology stormwater engineer, prepared comments on the hydrologic analysis portion of the submittal, with accompanying spreadsheets (see attachments).

As you know, the *Teanaway Temperature TMDL* protects hyporheic recharge to the river in order to ensure adequate flows during the late summer/early fall low-flow period. We note that you intend to design and install best management practices (BMPs) that will "collect runoff from a developed area and release it at a slower rate than it would typically run off the site." What does "typically" mean here? Please be more specific in your description of BMPs to ensure that post-construction site hydrology will remain virtually unchanged from pre-construction site hydrology, which includes appropriate absorption of water into hillside soils during the wet times of the year.

Additionally, the October 5, 2009 letter from GeoEngineers states that the flows from the project site likely provided little of the water in the hyporheic zone, and that most of the water in the hyporheic zone comes from runoff captured from the proposed project site and used for agricultural purposes. We do not completely agree with this analysis, especially regarding the north basin. Saturated soils on hillslopes also have a substantial influence on hyporheic recharge.

Please respond to these comments through a letter addressing each comment, rather than producing another hydrologic analysis. Because a new report will be needed during the project design phase, it is not necessary to develop a new report at this time.

Feel free to contact me with any questions at 509-457-7107 or cmck461@ecy.wa.gov, or you can contact Jane Creech at 509-925-2557 or jton461@ecy.wa.gov.

Sincerely,

Charles McKinney
Section Manager
Water Quality Program

Attachments

cc: Dan Valoff, Kittitas County Community Development Services
Doug D'Hondt, Kittitas County Public Works
Jon Merz, WA Dept of Ecology
Lynda Jamison, WA Dept of Ecology
Doug Howie, WA Dept of Ecology
Jane Creech, WA Dept of Ecology

Anna Nelson

From: Mandy Weed [mandy.weed@co.kittitas.wa.us] on behalf of CDS User [planning@co.kittitas.wa.us]
Sent: Monday, August 02, 2010 3:50 PM
To: Dan Valoff; Anna Nelson
Subject: FW: Teanaway Solar Reserve

Mandy Weed

From: Mike and Tory Haschak [mailto:mikeandtory@hotmail.com]
Sent: Monday, August 02, 2010 11:19 AM
To: CDS User
Subject: Teanaway Solar Reserve

Dear Sirs, please add these comments to the record on the August 11th meeting which I am unable to attend.

I am 100% behind the project known as the Teanaway Solar Reserve. This project is part of what we need to bring our country to energy independence and work towards a renewable clean energy future.

We have an opportunity to show America and the world that this technology can work and work well. It will not only be clean and quiet but bring stable jobs to this area. I see this as a win, win, win.

Please support this project.

Thank You,
Mike Haschak

Mike Haschak
51 Homestead Lane
Easton, WA. 98925
Cell 425-442-9976
mikeandtory@hotmail.com

---

message id: 38eb45916c6dcbdac24bb8719d004a14

Anna Nelson

From: Mandy Weed [mandy.weed@co.kittitas.wa.us] on behalf of CDS User [planning@co.kittitas.wa.us]
Sent: Tuesday, August 03, 2010 9:02 AM
To: Dan Valoff; Anna Nelson
Subject: FW: Appeal on TSR- DNS Ruling
Attachments: SEPA Objection TSR.doc

Mandy Weed

From: Robert Hill [mailto:hillshill@wavecable.com]
Sent: Tuesday, August 03, 2010 8:34 AM
To: CDS User
Subject: Appeal on TSR- DNS Ruling

Attached is my appeal to reconsider the approach to rule this project as a Determination of Non-significance. Please require a full SEPA/EIS review. Thank You, Thr Hill and Hanson families.

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message id: 38eb45916c6dcbdac24bb8719d004a14

July 30, 2010

To: Kittitas County Board of Adjusters

RE: Cup application (CU-09-00005)
Open Record on SEPA Appeal

From Robert and Diane Hill
2548 S. Camano Drive
Camano Island, Wash. 98282
Tax Parcels P314134,, P17792, P211129

Todd and Cheri Hill
P.O. Box 480
White Salmon, Wash. 98672
Parcel # P17792

Erik and Laura Hanson
11147 Womans Bay Road
Kodiak, Alaska 99615
Parcel #'s P21395, P21396

The approach being followed to allow this project impact to be ruled as a Determination of Non-Significance and not require the complete SEPA study and EIS, for such a large signature on the landscape, seems totally in-appropriate. We all oppose the Determination of Non-significance and request this be reconsidered.
I will offer a few of our major concerns.

1. **Aquifer recharge issue.** Downstream from this project are a significant number of properties that use, or will require, wells for water. This project has stated it will install nearly 400,000 panels in this 900 plus acre project. Each panel being about the size of a pick up truck. Rain and snow water are presently being evenly absorbed into the soil that supports a recharge of this aquifer, this clearly will be impacted.

It is obvious there has been no scientific data mitigating this impact. A SEPA review should require this be studied and addressed

2. Currently there is a moratorium on water extraction on all exempt wells in this area until a study is done to determine the flow of the aquifer and the impact of planned extractions will have on Senior Water Rights. If, in fact, this study shows limited water availability any reduction or impact to this flow can clearly make some properties unbuildable.. This was not considered in the EIS report submitted for the project. Who will pay for the 100's of properties this project could greatly impact and de-valve?

I think this is a major concern and needs to be included in this report

3. Water runoff from the non permeable surfaces will clearly be of a much larger volume for the remaining small ground sufaces surrounding the panels to absorb. This exposes a larger risk of floods than presently exist.

Again these issues need further evaluation and in the Determination of Non-significance hasn't properly been addressed.

4. I have opposed this project for many reasons, as addressed in my letter of 3-16-2010. I have had no response to that letter and feel that the project efforts for approval are much larger than to address the concerns of the neighbors and what a SEPA and EIS process will review. Yes, not a words of recognition on points in my letter have been received.....Going forward, there will be issues and this is not the way to be proactive.

5. Somewhere in the future their must be accountability. Obviously, with more facts and evaluation the information improves and the risk is reduced. Isn't that the prudent approach? Let's not rush with a Determination of Non-significance, I would think that is not the right thing to do.

Thank you for you consideration and we look forward to a thorough evaluation

The Hill's and Hanson's