Agenda: 01-13-06
Item: 8a

M E M O

TO: Board of Directors

FROM: District Manager

DATE: January 13, 2006

SUBJECT: San Lorenzo Valley Sports Complex

RECOMMENDATION:
It is recommended that the Board of Directors review this memo and consider the request for District participation in the San Lorenzo Unified School District's proposed sports complex project.

BACKGROUND
At the January 5, 2006 Board of Directors Meeting, your Board received correspondence from Mr. David Woods regarding the San Lorenzo Unified School District proposed sports complex project. See Attachment 1. Mr. Woods has requested your Board consider the District participate in the proposed project in the sum of $10,000.00. Mr. Wood has provided your Board with additional information regarding this project. See Attachment 2.

It is recommended that the Board of Directors review this memo and consider the request for District participation in the San Lorenzo Unified School District's proposed sports complex project.

James Mueller
District Manger

JAM/leb

Mr. David Wood
Fundraiser
San Lorenzo Valley Sports Complex Committee
13090 Highway 9
Suite 3
Boulder Creek, CA 95006

Mr. Jim Nelson
Vice President of the Board
San Lorenzo Valley Water District
13060 Highway 9
Boulder Creek, CA 95006

December 22, 2005

Dear Mr. Nelson:

I am contacting you on behalf of the SLV School District and on the recommendation of Rick Rogers. As I discussed with Rick, the San Lorenzo Valley Unified School District is planning to build a new sports center on the site of the current football field and dirt track at the SLV High School. The new facility will provide the first local outdoor sports facilities that can be used year round in any weather. The track will be widened to 8 lanes and resurfaced with a soft rubberized all weather material that promises to reduce injuries while permitting the community to produce major running events and tournaments locally. The field will be resurfaced with artificial turf, greatly improving its winter and spring availability while reducing injuries. In addition to these major efforts the field event facilities will also be upgraded and the visitor stands expanded so that the center can accommodate up to 1200 spectators at major events.

The project will cost about $1.5M in total, of which approximately 2/3 is already committed in either in-kind or cash donations. We are asking the Water District for a donation of $10,000, or more if possible. This project is important to all of the San Lorenzo Valley because residents today have no local access to all weather running or outdoor sports facilities. In fact, the nearest all weather track and field is at Soquel High School, 21 miles and during rush hour up to 1 hour of driving time away. The new facility will be available for use by community teams or organizations in addition to the 1,400 kids attending either the SLV High School or SLV Middle School. Another benefit of the project for the Water District is that the drainage system will be rebuilt and the mud runoff that chronically occurs each winter from the current dirt track and sod (mud in winter) field will be reduced or eliminated. The new facility will also strengthen the

school's ability to compete with other local schools for students – a critical factor for us when their income is dependent on enrollment and attendance statistics.

The school district hopes to begin construction during the winter and complete at least the track portion by mid-may 2006, with completion of the entire complex shortly thereafter. We would welcome San Lorenzo Valley Water District as our partner in this project, and look forward to working with you for the benefit of our organizations and the shared community we both serve. More project details, including the budget and funding sources committed to date, are available in the attached program prospectus as well as on the project website at www.slvsports.com .

I would like to see this issue placed on the agenda for the January 5 Board of Directors Meeting, and am prepared to come to the meeting to explain the project more fully and answer questions. Although this may seem a bit sudden, the matter is urgent because the school district must decide by the end of January if it has enough funding to proceed with the project or not, and your participation will be a factor in that decision. Your help is greatly appreciated, and please don't hesitate to call me at 831-338-8895 (Office) or 831-338-9792 (home).

Regards

David Wood

David Wood

Cc: Mr. Rick Rogers Director of Operations, San Lorenzo Valley Water District

SVL Sports Center Project Team
SLV Unified School District
831-338-8895
dwood@davidwoodassociates.com

January 9, 2006

San Lorenzo Valley Water District
13060 Highway 9
Boulder Creek, CA 95006

Dear Members of the Board of Directors:

Thank you for your time last week during the board meeting of January 3, and for your consideration of investing in our project. As requested during the meeting we have researched the likely impact of the SLV Sports Complex project on the San Lorenzo Valley watershed. The findings confirm that this project reduces water consumption by approximately 2 million gallons annually, reduces the silt load of water draining from the project area by more than 90%, and eliminates the introduction of more than 1000 pounds of fertilizer and herbicide into the watershed annually. In addition, the new drainage system stores rainwater and will tend to moderate discharge during high water conditions. These benefits are substantial and make this project a solid investment for the SLVWD that lies well within your charter to provide stewardship of our local water supply.

Drainage System Description

The drainage system is comprised of a porous surface (the synthetic turf) on top of a permeable composite underlayment material on top of a fine gravel leveling course of 2" depth. This collects water and moves it laterally to the edges where there is a large perimeter drainage trench filled with permeable rock and an 8" collector pipe which then ties into the existing 24" storm drain in the northern part of the campus. There will be no surface drains within the football/soccer field. The track will be drained with a continuous slit drain on the inside curb this will drain into the same 24" line. The cost of the drainage component of this project is approximately $300,000 of the $1.5M total budget.

Benefits

Buffering runoff during potential flood periods

The capacity of this system will handle over 10" of rain per hour with a large amount water stored within the system for slowing discharge. The system will have the capacity to store approximately 25,550 gallons of water. Once it is full it will begin discharging into the 24" pipe. This means we will need to get about 3" of rain before any heavy discharge will begin. This buffers the effect of short term high intensity storms on the river. In the most intense long term storm of course the system will run at capacity and on the heaviest

storms (25 year storm event) or greater the system will not be able to keep up and there will be overland flow, but at that point there is more to worry about than a dry playable football/soccer field. Once the storms subside the system will quickly catch up.

Reducing water consumption

The amount of water saved by not irrigating will be significant. Consider that turf needs a minimum of about 1" of water per week during the growing months March through October. With a field of about 100,000 square feet that is equivalent to 35 weeks of irrigation which equals nearly 1.9 million gallons of water. This does not take into account extremes in heat or fog during the growing months which always impact the amount of water that is needed to keep the grass healthy.

Reducing Introduction of Fertilizer and Herbicides into the Watershed

The school uses fertilizer combined with herbicide every 6-8 weeks during the 40 week growing season. Using standard coverage ratios and assuming that the field is fertilized 6 times annually we can see that about 600 pounds of nitrogen, and 450 pounds of other nutrients are introduced into the watershed annually as fertilizer for this field. Since the fertilizer is water soluble and the field is heavily watered much of this nitrogen will run into the river, where is becomes a unwelcome pollutant reducing the available oxygen in the water by promoting plant growth.

Estimation of Fertilizer Consumption on the SLV High School Football field	
Assumptions	
Field area (sq. feet)	100,000
# Fertilizer applications/yr.	6
# Lbs of Nitrogen/1000 sq feet/ application	1.00
# Lbs of Potassium/1000 sq ft/application	0.50
# Lbs of Phophorus/1000 sq ft/application	0.25
Usage Calculation	
Pounds of Nitrogen Used Annually	600
Pounds of Potassium Used Annually	300
Pounds of Phosphorus Used Annually	150

At this time we are unsure exactly how many pounds of herbicide are included in each application. However, it seems likely that this total is measured in the hundreds of pounds annually as well, and that much of it makes it way to river before decomposing.

Reducing erosion and sediment load of runoff

The current drainage system, as can be verified by the video report, is an open drainage system built to capture surface water. This is important because surface water in this field area is usually carrying a high load of silts due to the poor turf condition and adjacent erosion. So what does go through the system is carrying a high silt and pollutant load. In addition significant volumes of water are not captured by the system, particularly during heavy rains. This water runs across fields, dirt parking lots (including the SLVHS vehicle

maintenance area) and ultimately HWY 9 where it can pick up all kinds of pollutants that then are deposited in the San Lorenzo River.

When the new system is complete it will be a closed system for the most part. Surface water will be collected around the perimeters but measures to reduce erosion will be in place. All of the rainfall that lands on the new field area will essentially be filtered through our Brock system and perimeter collector trench. The new track will drain into the same system through a drain along the inside perimeter. However, this water will be very clean because it will be running off the rubberized track surface rather than the current dirt surface. As a result the sports complex water runoff will be more consistent and far cleaner after completion of the project than it is today.

As for quantities of cleaner run off let use the storm we had a few weeks back where Ben Lomond got 8 (+-) inches in 24 hours. The track and field area encompasses about 150,000 square feet of area. With this system all of that water would be collected and discharged into the river within about 36 hours. The amount of clean water that will now be discharged into the river would have been 64800 gallons. Currently that same amount of water would most likely end up in the river carrying silts, pollutants from fertilizers and pesticides to fuels and oils.

SVL Sports Center Project Team
SLV Unified School District
831-338-8895
dwood@davidwoodassociates.com

January 9, 2006

San Lorenzo Valley Water District
13060 Highway 9
Boulder Creek, CA 95006

Dear Members of the Board of Directors:

Thank you for your time last week during the board meeting of January 3, and for your consideration of investing in our project. As requested during the meeting we have researched the likely impact of the SLV Sports Complex project on the San Lorenzo Valley watershed. The findings confirm that this project reduces water consumption by approximately 2 million gallons annually, reduces the silt load of water draining from the project area by more than 90%, and eliminates the introduction of more than 1000 pounds of fertilizer and herbicide into the watershed annually. In addition, the new drainage system stores rainwater and will tend to moderate discharge during high water conditions. These benefits are substantial and make this project a solid investment for the SLVWD that lies well within your charter to provide stewardship of our local water supply.

Drainage System Description
The drainage system is comprised of a porous surface (the synthetic turf) on top of a permeable composite underlayment material on top of a fine gravel leveling course of 2" depth. This collects water and moves it laterally to the edges where there is a large perimeter drainage trench filled with permeable rock and an 8" collector pipe which then ties into the existing 24" storm drain in the northern part of the campus. There will be no surface drains within the football/soccer field. The track will be drained with a continuous slit drain on the inside curb this will drain into the same 24" line. The cost of the drainage component of this project is approximately $300,000 of the $1.5M total budget.

Benefits

Buffering runoff during potential flood periods
The capacity of this system will handle over 10" of rain per hour with a large amount water stored within the system for slowing discharge. The system will have the capacity to store

approximately 25,550 gallons of water. Once it is full it will begin discharging into the 24" pipe. This means we will need to get about 3" of rain before any heavy discharge will begin. This buffers the effect of short term high intensity storms on the river. In the most intense long term storm of course the system will run at capacity and on the heaviest storms (25 year storm event) or greater the system will not be able to keep up and there will be overland flow, but at that point there is more to worry about than a dry playable football/soccer field. Once the storms subside the system will quickly catch up.

Reducing water consumption

The amount of water saved by not irrigating will be significant. Consider that turf needs a minimum of about 1" of water per week during the growing months March through October. With a field of about 100,000 square feet that is equivalent to 35 weeks of irrigation which equals nearly 1.9 million gallons of water. This does not take into account extremes in heat or fog during the growing months which always impact the amount of water that is needed to keep the grass healthy.

Reducing Introduction of Fertilizer and Herbicides into the Watershed

The school uses fertilizer combined with herbicide every 6-8 weeks during the 40 week growing season. Using standard coverage ratios and assuming that the field is fertilized 6 times annually we can see that about 600 pounds of nitrogen, and 450 pounds of other nutrients are introduced into the watershed annually as fertilizer for this field. Since the fertilizer is water soluble and the field is heavily watered much of this nitrogen will run into the river, where is becomes a unwelcome pollutant reducing the available oxygen in the water by promoting plant growth.

Estimation of Fertilizer Consumption on the SLV High School Football field

Assumptions	
Field area (sq. feet)	100,000
# Fertilizer applications/yr.	6
# Lbs of Nitrogen/1000 sq feet/ application	1.00
# Lbs of Potassium/1000 sq ft/application	0.50
# Lbs of Phophorus/1000 sq ft/application	0.25
Usage Calculation	
Pounds of Nitrogen Used Annually	600
Pounds of Potassium Used Annually	300
Pounds of Phosphorus Used Annually	150

At this time we are unsure exactly how many pounds of herbicide are included in each application. However, it seems likely that this total is measured in the hundreds of pounds annually as well, and that much of it makes it way to river before decomposing.

Reducing erosion and sediment load of runoff

The current drainage system, as can be verified by the video report, is an open drainage system built to capture surface water. This is important because surface water in this field

area is usually carrying a high load of silts due to the poor turf condition and adjacent erosion. So what does go through the system is carrying a high silt and pollutant load. In addition significant volumes of water are not captured by the system, particularly during heavy rains. This water runs across fields, dirt parking lots (including the SLVHS vehicle maintenance area) and ultimately HWY 9 where it can pick up all kinds of pollutants that then are deposited in the San Lorenzo River.

When the new system is complete it will be a closed system for the most part. Surface water will be collected around the perimeters but measures to reduce erosion will be in place. All of the rainfall that lands on the new field area will essentially be filtered through our Brock system and perimeter collector trench. The new track will drain into the same system through a drain along the inside perimeter. However, this water will be very clean because it will be running off the rubberized track surface rather than the current dirt surface. As a result the sports complex water runoff will be more consistent and far cleaner after completion of the project than it is today.

As for quantities of cleaner run off let use the storm we had a few weeks back where Ben Lomond got 8 (+-) inches in 24 hours. The track and field area encompasses about 150,000 square feet of area. With this system all of that water would be collected and discharged into the river within about 36 hours. The amount of clean water that will now be discharged into the river would have been 64800 gallons. Currently that same amount of water would most likely end up in the river carrying silts, pollutants from fertilizers and pesticides to fuels and oils.